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This report is the ninth in a series which documents the Probability of Detection Task of the SAR project at the U.S.C.G. R&D Center.

16. Abstract

Surface Vessel Radar (SVR) detection data have been collected in conjunction with two visual detection experiments in 1980 and 1981 and a dedicated electronic detection experiment in 1981 conducted by the U.S.C.G. R&D Center. These are part of a series of experiments designed to improve search planning guidance contained in the National Search and Rescue Manual.

Eighty-two-foot Coast Guard cutters equipped with the Raytheon AN/SPS-64(V) radar and 41-foot utility boats and a 95-foot cutter equipped with the Raytheon AN/SPS-66 radar conducted detection and tracking runs with 4- and 7-man life rafts and 14- to 18-foot fiberglass boats. Targets were equipped with varying amounts of reflective material.

The AN/SPS-64(V) was found to achieve significantly longer detection ranges than the AN/SPS-66 with all target types. Radar reflectors were found to improve target detection probability. Cumulative Detection Probability (CDP) versus range curves are presented for representative radar/target type combinations. The detection and tracking run data were used to develop lateral range curves and sweep widths for SVR search. Radar cross sections are presented for small boats and life rafts.

Search guidance for using these radars is presented. Recommendations for future evaluations are outlined.

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EXECUTIVE SUMMARY

INTRODUCTION

1. Purpose of Report

Analyses of data collected during three surface vessel radar (SVR) detection experiments conducted by the U.S. Coast Guard Research and Development Center (R&D Center) are presented in this report. SVR effectiveness as a sensor in search and rescue (SAR) operations involving 14- to 18-foot boats and 4- to 7-man life rafts with and without radar reflectors is evaluated. Lateral range curves and sweep widths for various radar/target type combinations and sea states are presented. Radar cross sections for small boats and life rafts are computed using experiment data, and a method for predicting radar detection performance in a variety of environmental conditions is discussed.

2. Background

As part of the electronic detection evaluation task of the Probability of Detection (POD) in SAR Project assigned to the R&D Center, SVR detection performance data were collected during three experiments conducted in 1980 and 1981. The Coast Guard AN/SPS-64(V) (installed on 82-foot WPBs) and AN/SPS-66 (installed on 41-foot UTBs and a 95-foot WPB) radars were used to search for small boats and life rafts anchored in Block Island Sound (during Spring 1980 and Fall 1981) and off Panama City, FL (during winter 1981). Two types of data were collected: detection run data with semi-alerted radar operators and tracking run data with fully alerted radar operators.

These data were analyzed to determine the influence of certain environmental and controllable parameters on detection performance. The parameters investigated were:

Environment-Related	Controllable
Wind Speed	Range scale
Swell height	Range to target
Precipitation	Radar system type
Relative humidity	Search unit type
	Target size and composition
	Relative ocean wave direction.

3. Radar System Descriptions

The AN/SPS-64(V) radar is installed or planned for installation on Coast Guard cutters of the 82-foot WPB class and larger. The Raytheon model RM 1220/6XR with a 12-inch plan-position indicator (PPI) display was the configuration tested. The 6-foot horizontally polarized antenna has a beamwidth of 1.2 degrees and rotates at 33 rpm. The configuration tested transmits in the X-band at 9420 MHz with peak power of 20 kW. The 3- and 6-nm range scales were used for data collection.

The AN/SPS-66 is presently installed on Coast Guard 41-foot UTB-class vessels and a few 95-foot WPBs. The Raytheon model 3100 with a 7-inch PPI display was the configuration tested. The 2-1/2-foot horizontally polarized antenna has a beamwidth of 3.5 degrees and rotates at 30 rpm. The AN/SPS-66 transmits in the X-band at 9375 MHz with peak power of 7 kW. The 3- and 6-nm range scales were used for data collection.

RESULTS

Parameters that were found to have a significant influence on SVR detection performance with small targets during the experiments include:

Environment-Related	Controllable
Swell height	Target size and composition
	Range to target
	Radar system type
	Range scale
	Search unit type.

Other parameters, while they may affect SVR search performance to some extent, were either not represented in the data base by a wide enough range of values to evaluate or did not demonstrate a significant influence on target detection range and/or probability of detection.

Lateral range curves were generated for radar/target type combinations and sea states of interest. Sweep-width estimates based upon those lateral range curves are given in Table 1. Target radar cross sections for small targets with and without radar reflectors are given in Table 2.

Table 1. Small-Target Sweep Widths (in nautical miles) for AN/SPS-64(V) and AN/SPS-66 Radars

TARGET TYPE	AN/SPS-64(V)		AN/SPS-66	
	SWELL HEIGHT ≤ 2 ft	SWELL HEIGHT >2 to 4 ft	SWELL HEIGHT ≤ 2 ft	SWELL HEIGHT >2 to 4 ft
Small Boats and Life Rafts without Radar Reflectors	1.4 / 2.0	1.1 / 1.8	0.8 / 1.3	~0 / ~0
Small Boats and Life Rafts with Radar Reflectors	5.0 / 6.3	1.6 / 2.7	2.0 / 2.5	0.4 / 0.6

NOTE: In each box, the upper left number reflects closing the target (R_{max} to CPA only), while the lower right number reflects closing and opening the target (R_{max} to CPA to $-R_{max}$).

Table 2. Target Radar Cross-Section Estimates, σ

TARGET TYPE	σ (dB)	σ (m^2)
Small boats and life rafts without radar reflectors	-20.6	.0088
Small boats and life rafts with radar reflectors	-7.4	.18

CONCLUSIONS

The following conclusions concern SVR search for small boats and life rafts:

1. Radar type. The AN/SPS-64(V) detected small targets at significantly longer ranges than did the AN/SPS-66. Similar cumulative detection probabilities (CDPs) were achieved using both radars when targets closed to a range of less than 1 nautical mile. Sweep widths are larger for search units equipped with the AN/SPS-64(V) than for search units with the AN/SPS-66.

2. Radar reflectors. With the exception of the metallized fabric canopy, use of radar reflective devices significantly improved target detection probability and sweep width.

3. Swell height. Seas greater than 2 feet significantly reduced SVR sweep widths.

4. Range scale. Use of the 3-nm range scales of both radars resulted in better search performance than did use of the 6-nm range scales.

5. Radar equation. The radar range equation can be used with target radar cross sections given in Table 2 to calculate detection ranges for small targets in adverse weather.

6. Radar detection model. Sweep-width estimates for a variety of targets, radars, and environmental conditions can be computed using limited field data. Target radar cross sections and range/detection probability relationships must first be determined from the field data; then, the radar range equation can be used to generate lateral range curves and sweep widths.

RECOMMENDATIONS

The following recommendations are made for SVR search planning, search conduct, and future investigations:

1. The sweep widths given in Table 1 should be included in Section 846 of the National SAR Manual. These should be expanded upon as more data become available.

2. The 3-nm range scales of both radars should be used to search for small boats and life rafts.

3. SVR should be used to search for small targets when radar type, target type, and environmental conditions result in a predicted SVR sweep width that is greater than or equal to that for other available sensors. For situations where SVR sweep width is less than that for visual search, a combined visual/electronic detection model should be developed to determine the contribution that SVR search could make to overall search POD. This determination is especially important in the case of small search units when a visual scanner must be sacrificed to provide SVR monitor. Visual scanners should always be utilized to search the immediate vicinity of the SVR unit to prevent missing targets that pass through the area of heavy sea return near the search vessel.

4. The manual method used for visual search POD prediction should also be used for SVR POD prediction when appropriate SVR sweep widths are available.

5. The Coast Guard Computer-Assisted Search Planning (CASP) model should incorporate the radar detection model described in Section 3.1.2 of this report using field data from these and future radar detection experiments.

6. Effective radar reflective devices should be required safety equipment aboard small vessels and survival craft.

7. Tests should be conducted in the near future to determine range/detection probability relationships, sweep widths, and radar cross sections for a wide range of common SAR targets. Results of these tests will provide inputs to the manual and CASP methods of POD prediction.

8. The Coast Guard should continue testing commercially available radar reflective devices.

9. Combined electronic and visual detection models should be developed.

CHAPTER 1

BACKGROUND

1.1 SCOPE

This report presents results of Coast Guard Surface Vessel Radar (SVR) performance tests conducted in conjunction with visual detection experiments during the Spring of 1980 and the Winter of 1981 and an electronic detection experiment conducted during the Fall of 1981. Targets included 14- to 18-foot fiberglass boats with varying amounts of reflective equipment and 4- to 7-man life rafts with and without canopies, masts, and/or radar reflectors. Preliminary results have been previously reported (Reference 1).

The performance of the AN/SPS-66 [installed on 41-foot utility boats (UTBs)] and the AN/SPS-64(V) [installed on 82-foot patrol boats (WPBs)] in detecting these small search and rescue (SAR) targets is being evaluated as part of the project, Probability of Detection (POD) in SAR, by the U.S. Coast Guard Research and Development (R&D) Center. The ultimate goal of these SVR performance tests is to provide search planners with a quantitative detection model which can be used to predict POD for actual search missions.

This report is an interim summary of test results to date. Further tests are recommended to continue the evaluation of SVRs and to encompass the various types of radars and platforms employed by the Coast Guard.

1.2 AN/SPS-64(V) AND AN/SPS-66 SYSTEM DESCRIPTIONS

The Raytheon AN/SPS-64(V) (Reference 2) is the surface search/navigation radar installed (or planned for installation) on Coast Guard cutters of 82-foot WPB class and larger. The AN/SPS-64(V) tested is X-band, operating at a frequency of 9420 (±7) MHz with peak power output of 20 kW and a pulse-repetition frequency (PRF) of 900 to 3600 pulses per second (pps) depending

upon range scale selected. Beamwidth is 1.2 degrees for the 6-foot horizontally polarized antenna. The antenna rotates at 33 rpm. Range scales available are .25, .5, .75, 1.5, 3, 3 with power boost, 6, 12, 24, 48, and 64 nautical miles. Resolution varies with range scale selected and PRF, with an optimum of 20 yards on the .25, .5, and .75 range scales at 3600 pulses per second. The AN/SPS-64(V) comes in several configurations. Data for this report were gathered using the Raytheon model RM 1220/6XR with a 12-inch plan position indicator (PPI) display. This model is presently installed on the 82-foot WPB-class cutter.

The Raytheon AN/SPS-66 (Reference 3) is presently installed on the Coast Guard 41-foot UTB class. A few 95-foot WPB-class cutters still have the AN/SPS-66 radar pending AN/SPS-64(V) installation. A watertight model, AN/SPS-66A, is planned for installation on the Coast Guard 44-foot MLB-class boats. The AN/SPS-66 is X-band, operating at a frequency of 9375 (±30) MHz with peak power output of 7 kW and a PRF of 1500 to 3000 pps depending upon range scale selected. Beamwidth is 3.5 degrees for the 2.5-foot horizontally polarized antenna. The antenna rotates at 30 rpm. Range scales available are .5, 1.5, 3, 6, 12, and 32 nautical miles, with power boost available on the .5, 1.5, and 3 nm range scales. Resolution varies with range scale selected and PRF, with an optimum of 25 yards on the .5, 1.5, and 3 nm ranges scales at 3000 pulses per second. The AN/SPS-66 configuration tested was Raytheon model 3100 with a 7-inch PPI display.

1.3 DESCRIPTION OF THE EXPERIMENTS

The two visual detection experiments that supplied data for this report were conducted during the Spring of 1980 in Block Island Sound off the Connecticut/Rhode Island/New York coast and during the Winter of 1981 off the coast of Panama City, Florida. Detailed descriptions of these detection experiments and the exercise areas can be found in References 4, 5, and 6.

The Fall 1981 Electronic Detection Experiment was conducted in Block Island Sound. This SVR test is described in detail in Reference 7, the test plan.

1.3.1 Environmental Conditions

Environmental conditions were good to moderate during the experiments. The range of environmental parameters of interest encountered during the SVR tests is given in Table 1-1.

1.3.2 Targets and Radar Reflectors

A variety of small boat and life raft targets were used during the experiments. Several types of radar reflective devices were installed on selected targets to determine what, if any, improvement in detectability resulted from their use. Since installation of a radar reflector on a small boat or raft usually required use of either a 1-1/4-inch by 5-foot wood post or 1-3/4-inch by 6-foot metal post, similar targets were equipped with posts alone as a control. Some of the small fiberglass boats were equipped with an outboard or inboard/outboard engine. Table 1-2 summarizes the number of detection opportunities obtained for each target/equipment combination during the three SVR detection experiments.

Table 1-1. Range of Environmental Parameters Encountered

PARAMETER OF INTEREST	DETECTION RUNS		TRACKING RUNS	
	MINIMUM	MAXIMUM	MINIMUM	MAXIMUM
Wind Speed (kt)	0	16	0	23
Swell Height (ft)	0	4	0	4.5
Precipitation	None	Fog/rain	None	Rain
Relative Humidity (%)	39	100	43	95

Table 1-2. Summary of Target Opportunities

TARGET DESCRIPTION			NUMBER OF DETECTION OPPORTUNITIES			
			AN/SPS-66		AN/SPS-64(V)	
			DETECTION RUNS	TRACKING RUNS	DETECTION RUNS	TRACKING RUNS
SMALL BOATS	14- to 16-foot fiberglass outboard	without reflective equipment	33	19	31	4
		without reflective equipment; 5-foot wooden post installed	6	0	6	0
	18- to 18-foot fiberglass outboard	with engine	28	9	29	4
	14- to 16-foot fiberglass outboard	with 6-foot steel post installed	5	0	3	0
		with steel post and 12-inch Echomaster radar reflector	5	0	3	0
		with wooden post and 12-inch Echomaster radar reflector	11	0	11	0
		with wooden post and 11-inch Davis emergency radar reflector	3	19	3	5
		with wooden post and Radark radar reflector	8	35	11	8
LIFE RAFTS	7-man non-canopied life raft	without reflective equipment	23	12	19	6
		without reflective equipment; 5-foot wooden post installed	6	0	5	0
		with 6-foot steel post installed	6	0	3	0
		with steel post and 12-inch Echomaster radar reflector	7	0	3	0
		with steel post and Marin gold-screen radar reflector	7	0	3	0
		with wooden post and 12-inch Echomaster radar reflector	6	23	5	8
		with wooden post and 11-inch Davis emergency radar reflector	21	18	21	2
		with wooden post and Radark radar reflector	0	3	0	0
	4- to 6-man canopied life raft	without reflective equipment	19	8	15	4
		with Mobay metallized fabric canopy	17	14	11	6
TOTALS			211	160	182	47

The radar reflective devices were of several types. Table 1-3 summarizes information pertinent to each radar reflector tested.

1.3.3 Experiment Design and Conduct

1.3.3.1 Design

The three experiments described in this report were designed as system performance tests so that an upper bound on the detection capability of the AN/SPS-64(V) and -66 radars could be determined. Two types of SVR searches were conducted: detection runs and tracking runs, as described in Reference 8.

The objective of the detection runs was to collect data for developing cumulative detection probability (CDP) versus range curves for each radar/target type combination tested. For the detection runs, the operators were

Table 1-3. Radar Reflectors Tested

REFLECTIVE DEVICE	DESCRIPTION
Davis Echomaster Deluxe Radar Reflector	Octahedral cluster (12.5-inch diameter) of circular aluminum reflector plates[1]
Davis Echomaster Emergency Radar Reflector	Circular plastic metal foil laminate on cardboard reflector (10.5-inch diameter)[1]
Radark Folding Radar Reflector	Aluminum reflector plate (12 inches square with 16-inch diagonal)
Morin Radar Reflector	Gold mesh screen (14 inches square)
Mobay Reflector	Canopy-shaped, metallized fabric (nickel coated)

[1]Mounted in the "catch rain" position.

semi-alerted; that is, they had some knowledge of where and when to expect radar contacts to occur.

Tracking runs were conducted to collect blip/scan ratio data. The blip/scan ratio is an estimate of the instantaneous probability that radar will detect a target at a given range. For the tracking runs, the operators were fully alerted; that is, they had accurate knowledge of target range and bearing.

Knowing the blip/scan ratio and CDP for a given radar/target type combination at various ranges facilitates the development of lateral range curves that represent the sensor's detection performance (Reference 8). The lateral range curve is used by search planners to determine sweep width, select track spacing, and estimate overall POD for a search. The lateral range curves can also be used as inputs to the Coast Guard's Computer Assisted Search Planning (CASP) model (Reference 9) and to provide operational guidance for the employment of SVR as a SAR sensor. Further discussion of search performance measures and search planning can be found in References 4, 5, 6, and 10.

Experiment data were also used to estimate the range (Rp) at which the radars had an instantaneous probability (P) of detecting a given target. This range was used along with other radar and environmental parameters in the radar range equation to calculate target radar cross sections. Once reliable radar cross sections have been calculated, radar detection performance estimates can be extrapolated (with caution) to environmental conditions not present in the experiment data base. Discussion of the radar range equation and specific parameter values for the AN/SPS-64(V) and AN/SPS-66 radars can be found in Reference 11. Additional discussion of the radar range equation and calculation of target cross section can be found in References 12 and 13.

1.3.3.2 Conduct

Before each day's experiment, a search and rescue exercise (SAREX) message was sent to participating units. The SAREX message assigned radar range

scales and search patterns, specified search targets, and provided other information essential to the conduct of the experiment. The R&D Center UTB served as On-Scene Commander (OSC) in charge of target setting and retrieval, communications, exercise control, and the recording of environmental parameters of interest.

Parameters of interest that have been identified as potentially affecting SVR detection performance (References 10, 11, 12, and 13) include:

Environment-Related	Controllable
Wind speed	Range scale
Swell height	Range to target
Precipitation	Radar system type
Relative humidity	Search unit type
	Target size and composition
	Relative ocean wave direction.

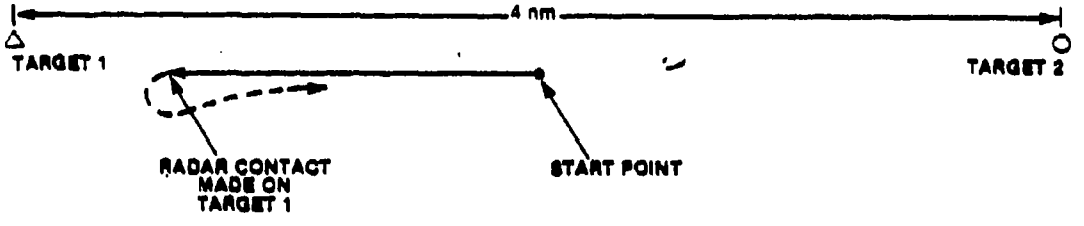
These parameters were recorded for each radar detection opportunity during the experiment.

The detection and tracking runs were conducted with an R&D Center observer aboard each search craft. The observer recorded time, relative bearing, and range for each radar contact reported by the radar operator along with the parameters listed above and visual confirmations, distractions, etc. Targets were approached from a range greater than the expected detection range and closed until detection occurred or the target passed close aboard the search unit. Target and search unit positions were monitored and reconstructed using a computer-automated Microwave Tracking System (MTS) described in Section 1.3.5.

1.3.4 Search Patterns

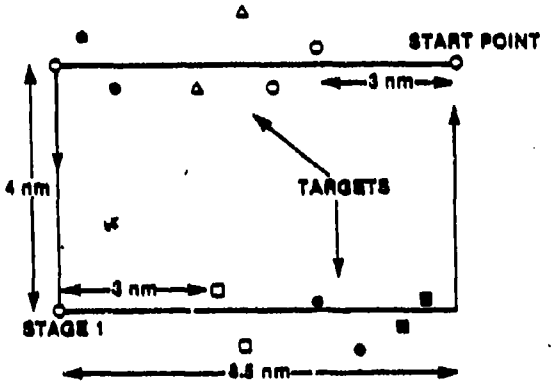
Several search patterns were employed during the SVR tests. Detection runs were designed so that the search unit approached a target from a distance greater than the expected detection range and closed until detection occurred or a closest point of approach (CPA) of less than about 0.25 nm was reached. In practice, navigation errors sometimes resulted in start ranges of less than the expected detection range and CPAs larger than 0.25 nm; however, these problems were compensated for in the CDP calculations and reduced the radar operator's a priori knowledge of where and when to expect contacts to occur. Tracking runs were designed so that the search unit approached the target from a distance greater than the expected detection range and closed to very nearly 0 range.

During the Spring 1980 Experiment a very limited amount of CDP data was collected. Search units were instructed to make trackline runs back and forth between targets which were placed 4 nm apart. Range was closed until the first target was detected or CPA occurred (the search unit passed by the target without detecting). At that time, course was reversed and a similar approach was made on a second target (see Sketch 1).



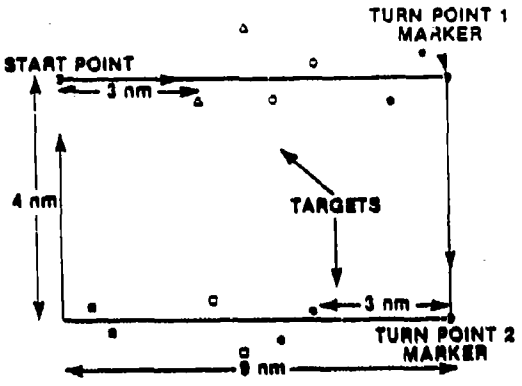
Sketch 1. Trackline Runs (Spring 1980 Experiment)

During the Winter 1981 Experiment in Panama City, Florida, three days of CDP data were collected. A search pattern consisting of two parallel legs 8.5 nm long and 4 nm apart was typically assigned to the search units. Targets were placed near the assigned trackline beginning 3 nm from the start of each leg, as shown in Sketch 2. This pattern provided a greater number of detection opportunities per search hour than did the trackline runs. Targets were placed far enough apart so that detection of one target would not interfere with the operator's ability to detect successive targets. The Naval Coastal Systems Center (NCSC) data collection platform (Stage I) was used as a reference point to assist search units in executing their assigned search patterns.



Sketch 2. Parallel Search Pattern (Winter 1981 Experiment)

During the Fall 1981 Experiment in Block Island Sound, five days of CDP and eight days of blip/scan data were collected. The detection runs were conducted in a pattern consisting of two adjacent lines of life rafts and/or 16- to 18-foot fiberglass boats as shown in Sketch 3. This pattern was similar to those used in Winter 1981. Each line of targets was approached from a range of at least 3 nm, which experience had shown to be greater than the expected initial detection range for most targets of the type used during

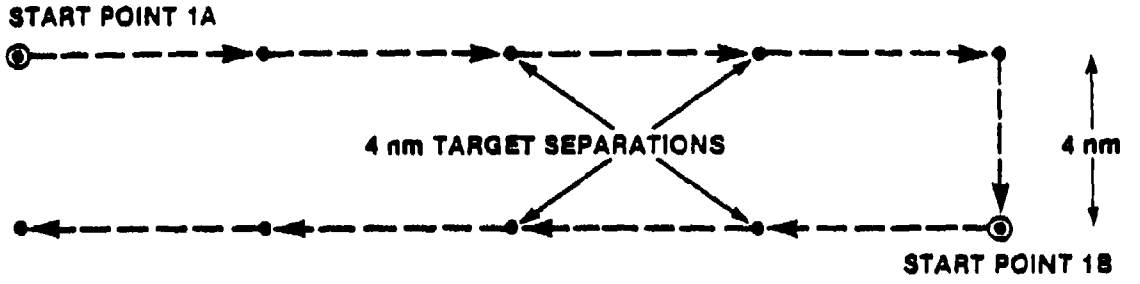


Sketch 3. Example of SVR Detection Run Search Pattern (Fall 1981 Experiment)

data collection. As each target was closed, the radar monitor was to report initial detection to the onboard observer. Visual scanners were to attempt confirmation of all radar contacts whenever possible. As in the Winter 1981 Experiment, targets were separated along the trackline by sufficient distance so that the detection of one target would not interfere with detection of subsequent targets. Matched pairs of targets were used to test the effectiveness of several radar reflective devices; that is, identical targets, one with a radar reflector and one without or each with different devices were placed on the same trackline.

Also during the Fall 1981 Experiment, tracking runs were conducted so that targets were approached one at a time from a range of 4 nautical miles. Upon initial detection of the target, the MTS station was consulted for verification (via a range/bearing check) that the radar contact was, in fact, the target of interest. Upon target validation, the SRU closed to near-zero range while a radar monitor informed the onboard observer whether or not the target appeared as a blip on each scan of the PPI display. Targets were set in staggered rows so that successive tracking runs could be made without "back-tracking". Starting times were separated between units by an amount sufficient for one target to be closed (about 15 minutes) and all units searched at the same speed (typically 15 knots) so that little chance of target masking or

mutual interference existed between SRUs. Sketch 4 illustrates the type of target arrangement and search pattern used for tracking runs during the experiment.



Sketch 4. Example of SVR Tracking Run Search Pattern (Fall 1981 Experiment)

A second run was made through the target array in the opposite direction once all units had completed the first search. By reversing the direction of search on alternate runs, performance differences, if any, resulting from searching into versus with ocean wave direction could be determined.

Because these SVR searches were system performance tests, the SRU was aware of the number, type, and general location of all targets. Accurate navigation of the trackline was important to ensure efficient data collection, so turn points were marked by buoys or the OSC vessel during detection runs as shown in Sketch 3. Initial target detections were validated by the MTS station before the tracking runs were continued. It was important that each SRU scheduled to conduct SVR tests ensured its radar was in good working order before executing these searches, and this fact was emphasized to all participating units during pre-experiment briefings.

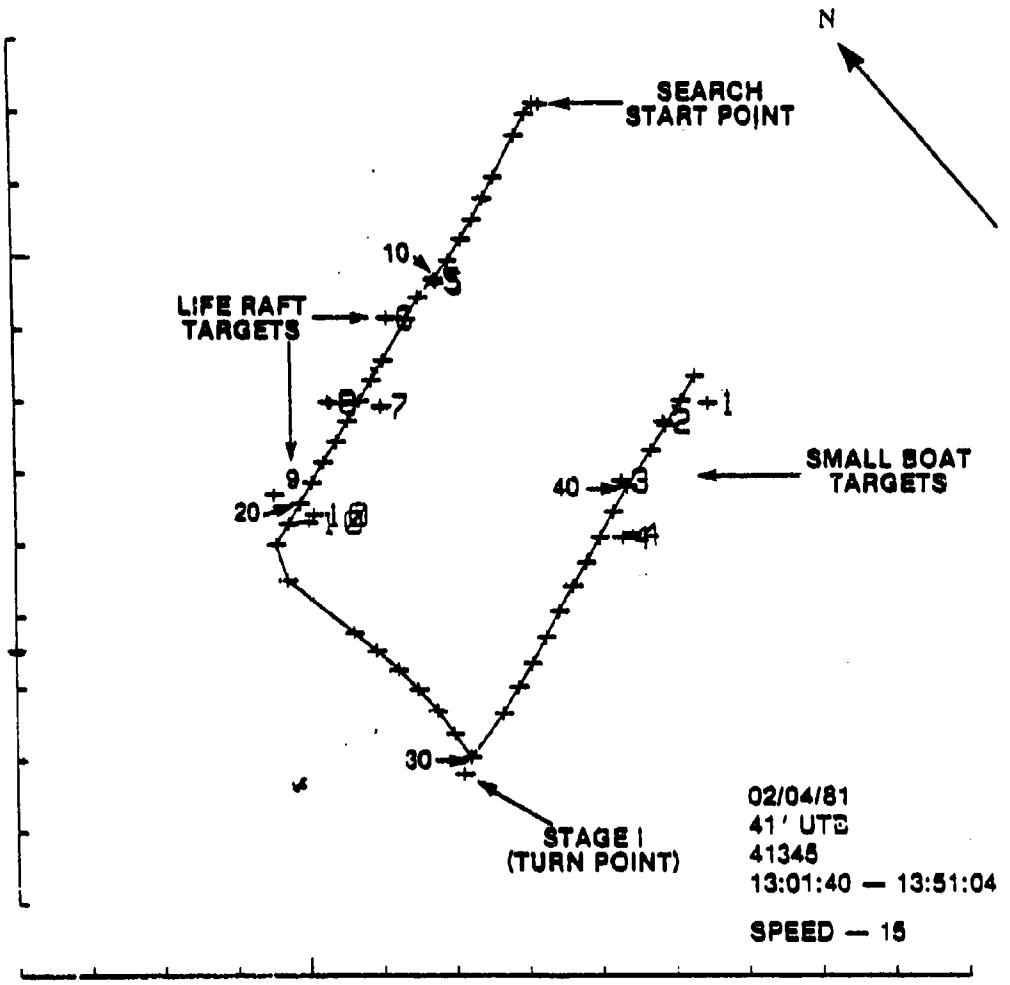
1.3.5 Tracking and Reconstruction

Target locations and search unit positions were monitored using an automated Microwave Tracking System (MTS) consisting of a Motorola MiniRanger III mobile radar tracking system coupled with a Hewlett-Packard 9845B minicomputer and model 9872A plotter. This system was developed by the Coast Guard R&D Center for the POD in SAR Project to provide target position and search track reconstruction accurate to 0.1 nautical mile. Its operation is described in detail in Reference 4. Detection and CPA ranges were determined for each target opportunity by referring to detection logs kept by the observer aboard each search unit and MTS position/time plots. When the range and relative bearing of a contact reported by the radar operator agreed with the MTS plot, a target detection was recorded. Actual detection ranges were measured on the MTS plot directly from the search unit's trackline position at time of contact to the target position. An example of an MTS position plot and time printout for a search conducted during the Winter 1981 Experiment is shown in Figure 1-1.

1.4 ANALYSIS APPROACH

1.4.1 Aggregation of Data

Before CDP and lateral range curves for the radar data were developed, performance differences between the two radars, differences in detectability among targets, and logical data grouping schemes had to be identified. This was accomplished in two steps. Preliminary data sorts were made to determine which parameters most strongly influenced detection ranges achieved and/or percent of targets detected. Results of this analysis suggested that radar type, target type, and swell height had the strongest influence on detection performance. Other parameters, while they may have influenced detection performance to a limited extent, were not represented by a wide enough range of values or did not demonstrate a strong enough influence to warrant further fragmentation of the somewhat limited data base. The data were grouped according to radar type, target type, and swell height. A computer routine



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1 - 13:01:40	2 - 13:02:32	3 - 13:03:32	4 - 13:04:32
5 - 13:06:30	6 - 13:07:30	7 - 13:08:30	8 - 13:09:30
9 - 13:10:30	10 - 13:11:29	11 - 13:12:30	12 - 13:13:33
13 - 13:15:33	14 - 13:16:31	15 - 13:17:31	16 - 13:18:31
17 - 13:19:31	18 - 13:20:31	19 - 13:21:31	20 - 13:22:31
21 - 13:23:31	22 - 13:24:31	23 - 13:26:33	24 - 13:29:32
25 - 13:30:32	26 - 13:31:32	27 - 13:32:32	28 - 13:33:32
29 - 13:34:32	30 - 13:35:32	31 - 13:37:33	32 - 13:38:36
33 - 13:39:33	34 - 13:40:36	35 - 13:41:37	36 - 13:42:36
37 - 13:43:33	38 - 13:44:33	39 - 13:45:33	40 - 13:46:33
41 - 13:48:04	42 - 13:49:04	43 - 13:50:04	44 - 13:51:04

Figure 1-1. Example of MTS Plot

that performs two-way analysis of variance for unbalanced data (Reference 14) was used to quantitatively determine which radar/target type combination could be aggregated for further analysis.

All data obtained during the detection and tracking runs are included in Appendix A of this report.

1.4.2 CDP Curves

CDP versus range curves were plotted using the computer algorithm described in Reference 15 and Appendix B of this report. The CDP curves provided a more detailed picture of how range, radar type, target type, and swell height affect probability of detection. CDP versus range data are also essential in determining operator factor, described in the next section, which is used for lateral range curve calculation. Section 2.3.1 presents and discusses the CDP curves in detail.

Comparison of CDP curves was also used to identify differences in detection performance achieved by the two radars operating on the 3- and 6-nautical mile range scales.

1.4.3 Operator Factor

CDP versus range curves were used along with tracking run data to determine the operator factors required for lateral range curve calculations. Operator factor, denoted by p_o, is defined by Reference 15 as the probability that a radar operator, not knowing target location, will see a recognizable blip if it is presented on the PPI display. Mathematically,

$$p_o = \frac{\ln (1-CDP_{\Delta r_j})}{-L\left(\sum_{i=1}^{j} \Psi^2_{\Delta r_i}\right)}$$

where:

$CDP_{\Delta r_j}$ = cumulative detection probability for a target which has closed from maximum sensor range to some range interval Δr_j,

L = number of glimpses the radar gets of the target as it passes through each uniformly long-range interval Δr_j at constant speed (a glimpse is defined here as one sweep of the PPI display), and

$\sum_{i=1}^{j} \Psi^2_{\Delta r_i}$ = summation over j range intervals (starting at maximum sensor range) of the probability (determined from tracking run data) that a recognizable blip will appear on the PPI display on two consecutive sweeps while the target is in the i^{th} range interval. This quantity is used when applying the well-known "double blip hypothesis"; that is, that an unalerted operator will call a radar contact a target only if it appears on two consecutive sweeps.

Operator factor can vary from one individual to another and with the amount of clutter present on the PPI display. A value of p_o obtained from each data group which resulted in good agreement with CDP data was used for lateral range curve computation. Reference 15 provides a more detailed description of p_o calculation.

1.4.4 Lateral Range Curves

Lateral range curves were generated according to the method described in Reference 15. Briefly, the method consists of integrating detection probability over range from maximum sensor range to the lateral range of interest (CPA) or from maximum sensor range through CPA to maximum sensor range behind the search unit. Detection probability is defined here as the probability that a radar operator will detect a target if it appears on two consecutive

sweeps of the PPI display. Tracking run data and operator factors were used to determine detection probability for these calculations. Mathematically,

$$P(x) = 1 - e^{-\frac{60ap_o}{vx}\int_{\substack{y=0 \\ \text{or} \\ y=-\sqrt{R_m^2-x^2}}}^{y=+\sqrt{R_m^2-x^2}} \frac{\Psi^2}{(\sqrt{y^2+x^2})} y\,dy}$$

where:

$P(x)$ = probability of detecting a target that closes to lateral range x along a path parallel to the search vessel's track,

a = antenna rpm,

p_o = operator factor,

v = search vessel speed in knots,

y = range from target to CPA along a line parallel to search vessel track,

R_m = maximum sensor range, and

$\frac{\Psi^2}{(\sqrt{y^2+x^2})}$ = probability, determined from tracking run data, that a recognizable blip will appear on the PPI display on two consecutive sweeps when the target is at range $r = \sqrt{y^2+x^2}$.

Figure 1-2 depicts these quantities graphically. By repeating this integration for a number of lateral ranges from 0 to maximum sensor range, probability of detection versus lateral range curves were generated for each data group of interest.

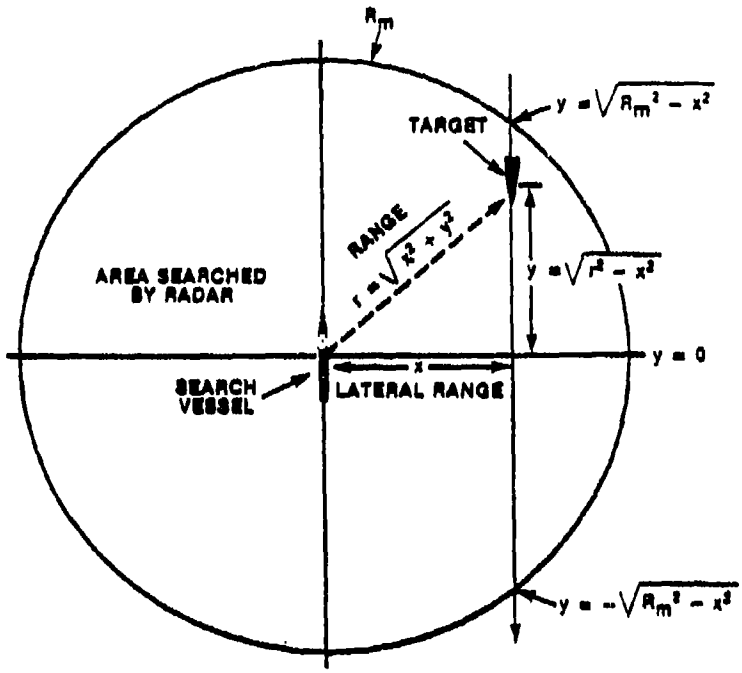


Figure 1-2. Searcher-Target Interaction at Lateral Range x

It can be seen from the preceding discussion and the description of CDP given in Appendix B that lateral range and CDP curves should intersect the probability axis at a common point when lateral range equals zero. Figure 1-3 depicts this relationship. An ideal CDP curve is built by summing detection probabilities from maximum sensor range to zero range along a radial path. Probability of detection at zero lateral range is computed in precisely the same manner. This fact was used to determine an appropriate value of p_o for lateral range curve computations. Several values of p_o were calculated for each data base. From these, a value of p_o was chosen which resulted in a probability of detection at zero lateral range that was compatible with the appropriate CDP curve. Lateral range curves for each data group of interest are presented in Section 2.3.2.

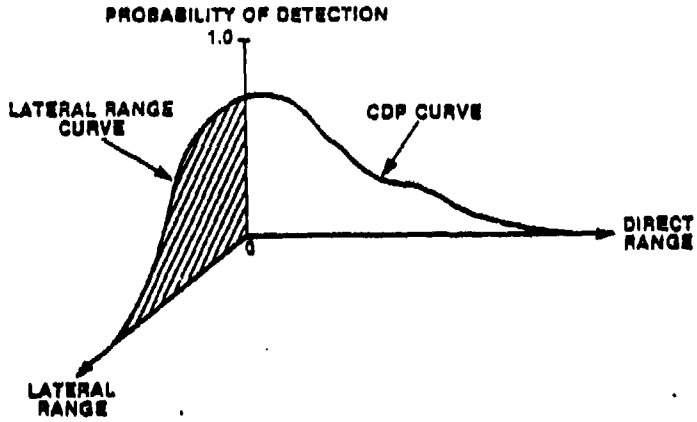


Figure 1-3. Relationship Between CDP and Lateral Range Curves

1.4.5 Sweep Width

The primary performance measure currently used by SAR mission coordinators to plan searches is sweep width (W). Sweep width is a single number representation of a more complex lateral range/target detection probability relationship. Mathematically,

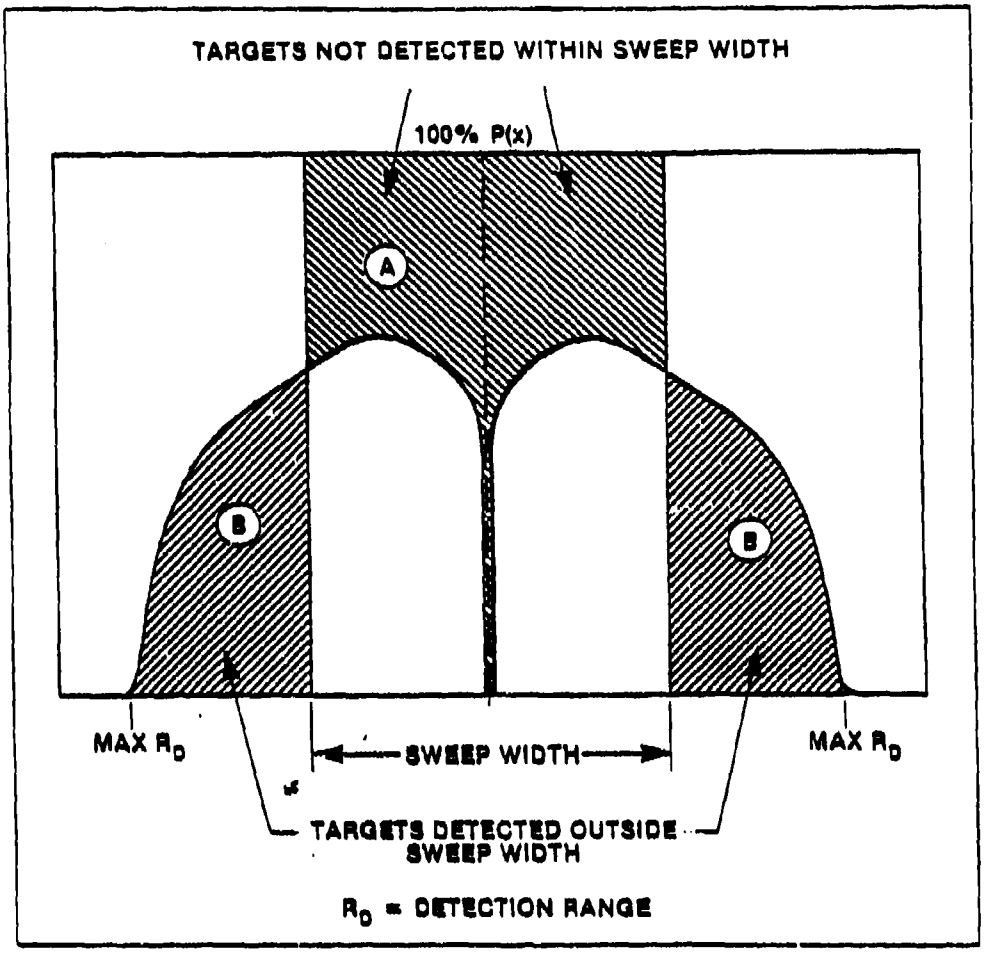
$$\text{Sweep Width } (W) = \int_{-\infty}^{+\infty} P(x)\, dx,$$

where:

$P(x)$ = probability of detection at lateral range x.

Figure 1-4 shows a typical detection probability $P(x)$ versus lateral range curve for electronic sensors such as SVR. Electronic sensors perform differently than the human eye or other optical sensors over lateral range in that, with strong targets, they obey a definite detection law function; that is, they operate with a fairly uniform $P(x)$ near unity out to their maximum range, and detect no targets beyond that range. For targets that provide weak signal reflections near the threshold of a sensor's capability to detect and

A. GRAPHIC PRESENTATION OF SWEEP WIDTH



B. PICTORIAL PRESENTATION OF SWEEP WIDTH

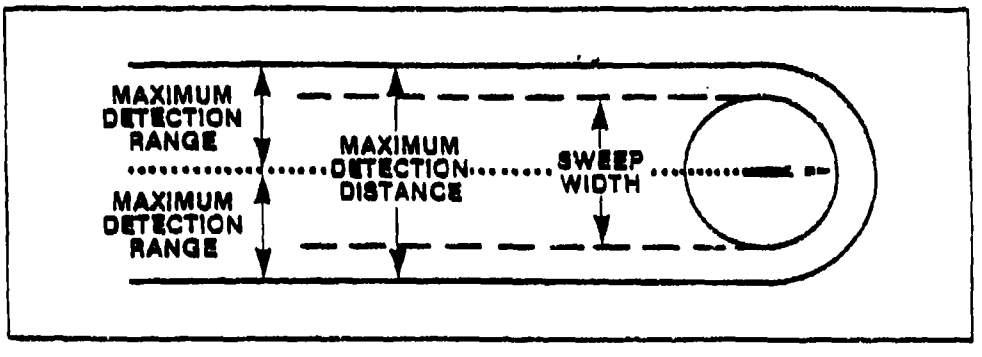


Figure 1-4. Graphic and Pictorial Presentation of Sweep Width

that might become subject to shadowing effects by waves or masking due to sea return, this P(x) can drop well below unity with the shape of the lateral range curve resembling that of Koopman's "Class B" radar target (Reference 16). The dip in the P(x) versus lateral range curve near the searcher's track is due to two effects. A portion of the search area adjacent to the search unit either is not illuminated because of the angle through which the microwave signal is transmitted or is masked by excessively strong sea return. The size of this area depends on sea state and antenna height.

Conceptually, sweep width is the numerical range value obtained by choosing the distance from any given search track that will yield a number of detections beyond the sweep width range equal to the number of targets missed at ranges less than or equal to the sweep width. Figure 1-4 presents this concept of sweep width. The number of targets missed inside the sweep width distance is indicated by the shaded area near the top middle of the rectangle (area A), while the number of targets sighted beyond the sweep width distance is indicated by the shaded areas at each end of the rectangle (area B). Referring only to the shaded areas, when the number of targets missed equals the number of targets sighted (area A = area B), sweep width is defined. A detailed mathematical development of sweep width can be found in Search and Screening (Reference 16).

For visual searches, the SAR Manual (Reference 10) uses sweep width to calculate a quantity known as coverage factor (C), which in turn is used to predict cumulative probability of detection (POD) for a given search. The SAR Manual procedure for visual search POD prediction will be applicable to SVR search only if SVR lateral range curves do not differ substantially from those for visual search.

Approximate sweep widths were determined from the lateral range curves presented in Section 2.3.2 of this report. Simpson's First Rule for approximate integration was used to calculate the area under each lateral range curve. Probability ordinates were chosen every 0.1 nm on the lateral range curves, and the formula,

$$W = \frac{2}{3}(0.1)\,[P_1 + 4P_2 + 2P_3 + 4P_4 + \ldots + P_n] \quad ,$$

where P_n denotes the n^{th} equally-spaced probability ordinate, was used to determine approximate sweep width. Sweep width estimates for each radar/target type combination of interest are presented in Section 2.4.

1.4.6 Target Radar Cross Sections

In Reference 12, L. V. Blake presents a convenient form for using the basic pulse-radar range equation. This form expresses R_p, the range at which instantaneous (not cumulative) target detection probability is equal to P, as a logarithmic sum of terms which include system, target, and environmental characteristics. To a first-approximation, the radar range equation expressed in this manner is

$$R_p = \text{antilog}\,[2.111 + \tfrac{1}{40}(10\log P_t + 10\log\tau + G_t + G_r + 10\log\sigma - 20\log f - 10\log T_s - V_o - C_B - L_t - L_p)].$$

where:

P_t = peak transmitter power (kW)

τ = pulse width (μsec)

G_t, G_r = transmitter and receiver gains (dB)

σ = target radar cross section (m^2)

f = frequency of the radar signal (MHz)

T_s = system noise temperature (°K)

V_o = visibility factor (dB)

C_B = bandwidth correction factor (dB)

L_t = transmitter loss (dB)

L_p = beamshape loss (dB).

Detailed discussion of these terms is well beyond the scope of this paper and can be found in References 11, 12, and 13. Values of all the above quantities except σ for the AN/SPS-64(V) and AN/SPS-66 radars were obtained from References 2, 3, 11, and 12. Values of $R_{.10}$ and/or $R_{.25}$ were determined from detection run data and the equation was solved for σ. Using data obtained in good weather, values of σ for targets with and without radar reflectors were calculated and compared for consistency. Due to the relatively small range values involved with these targets (less than 3 nm), pattern propagation and atmospheric absorption loss factors were ignored in the σ calculations.

Using the radar cross sections obtained from the procedure described above, adverse weather detection range estimates were made by introducing atmospheric attenuation loss and clutter terms to the range equation. In this manner, estimates of small target detection capability (if any) in adverse weather could be made.

CHAPTER 2

RESULTS

2.1 INTRODUCTION

Section 2.2 discusses how data were aggregated for further analysis. CDP and lateral range curves for the experiment data are presented in Section 2.3. Sweep-width estimates for radar/target type combinations and environmental conditions of interest were calculated from the lateral range curves and are tabulated in Section 2.4. Section 2.5 compares 3- and 6-nautical mile radar range scale performance and Section 2.6 compares AN/SPS-66 detection performance on 41-foot UTBs and 95-foot WPBs. Finally, target radar cross sections are presented and discussed in Section 2.7.

2.2 TARGET AND RADAR TYPE COMPARISONS

Two-way analysis of variance for unbalanced data (Reference 14) was used to compare detection ranges and percent of targets detected for the two radars with each of the target types tested. The objectives of this analysis were to:

1. Identify any performance differences between the two radars,

2. Identify differences in detectability among targets, and

3. Determine logical groupings of data for lateral range curve calculations.

Tables 2-1 and 2-2 summarize the number of detections (with their associated mean detection ranges) and misses which occurred for each radar type/target type combination during detection runs. Preliminary data sorts and

Table 2-1. Summary of Detection Runs for AN/SPS-64(V) Radar

TARGET DESCRIPTION			TOTAL OPPORTUNITIES	NUMBER OF DETECTIONS	PERCENT DETECTED	MEAN DETECTION RANGE (nm)	MEAN SWELL HEIGHT (ft)
SMALL BOATS	14- to 18-foot fiberglass outboard	without reflective equipment	31	16	52	1.2	1.1
		without reflective equipment; 5-foot wooden post installed	6	2	33	1.9	0.9
	16- to 18-foot fiberglass outboard	with engine	29	10	34	1.4	2.0
	14- to 18-foot fiberglass outboard	with 6-foot steel post installed	3	3	100	2.4	0.3
		with steel post and 12-inch Echomaster radar reflector	3	3	100	2.8	0.3
		with wooden post and 12-inch Echomaster radar reflector	11	9	82	2.2	1.1
		with wooden post and 11-inch Davis emergency radar reflector	3	0	0	-	2.8
		with wooden post and Radark radar reflector	11	4	36	2.0	3.2
LIFE RAFTS	7-man non-canopied life raft	without reflective equipment	19	9	47	1.7	1.2
		without reflective equipment; 5-foot wooden post installed	5	1	20	0.9	2.0
		with 6-foot steel post installed	3	2	67	2.0	0
		with steel post and 12-inch Echomaster radar reflector	3	3	100	2.2	0
		with steel post and Morin gold-screen radar reflector	3	2	67	2.3	0.3
		with wooden post and 12-inch Echomaster radar reflector	5	1	20	1.5	2.0
		with wooden post and 11-inch Davis emergency radar reflector	21	11	52	2.3	2.6
	4- to 6-man canopied life raft	without reflective equipment	15	5	33	2.0	1.6
		with Mobay metallized fabric canopy	11	2	18	2.4	1.7

Table 2-2. Summary of Detection Runs for AN/SPS-66 Radar

TARGET DESCRIPTION			TOTAL OPPORTUNITIES	NUMBER OF DETECTIONS	PERCENT DETECTED	MEAN DETECTION RANGE (nm)	MEAN SWELL HEIGHT (ft)
SMALL BOATS	14- to 18-foot fiberglass outboard	without reflective equipment	33	8	24	1.1	1.1
		without reflective equipment; 8-foot wooden post installed	6	1	17	1.9	1.2
	18- to 18-foot fiberglass outboard	with engine	28	6	21	0.8	1.8
	14- to 18-foot fiberglass outboard	with 8-foot steel post installed	5	5	100	1.1	0
		with steel post and 12-inch Echomaster radar reflector	5	5	100	0.9	0
		with wooden post and 12-inch Echomaster radar reflector	11	6	55	0.9	1.4
		with wooden post and 11-inch Davis emergency radar reflector	3	1	33	1.3	2.5
		with wooden post and Radark radar reflector	8	2	25	0.8	3.4
LIFE RAFTS	7-man non-canopied life raft	without reflective equipment	23	11	48	0.7	1.1
		without reflective equipment; 8-foot wooden post installed	6	1	17	0.4	1.7
		with 8-foot steel post installed	6	4	67	1.1	0.7
		with steel post and 12-inch Echomaster radar reflector	7	6	86	1.2	0.8
		with steel post and Marin gold-screen radar reflector	7	7	100	1.1	0.8
		with wooden post and 12-inch Echomaster radar reflector	6	2	33	1.0	1.7
		with wooden post and 11-inch Davis emergency radar reflector	21	6	29	1.0	2.5
	4- to 6-man canopied life raft	without reflective equipment	19	8	42	1.1	1.5
		with Mobay metallized fabric canopy	17	8	47	0.8	1.6

field experience indicated that swell height has a strong influence on detection performance with these small targets; thus, it is included as a parameter in the tables for reference purposes.

Inspection of Tables 2-1 and 2-2 indicates that targets with radar reflectors tended to have higher detection probabilities and were sometimes detected at longer ranges than similar targets without reflective equipment. The reader will note that Reference 1 indicated this result with a more limited data base, and that a steel post alone can be considered to be a radar reflector.

Comparison of Tables 2-1 and 2-2 also indicates that the AN/SPS-64(V) radar achieved consistently greater detection ranges than the AN/SPS-66, as was previously indicated in Reference 1. Results of this somewhat subjective comparison suggested that the data might be grouped under four headings according to radar type and targets with/without radar reflectors. The analysis of variance routine was used to test this hypothesis quantitatively. To reduce the influence of sea conditions on this comparison, targets represented by detection opportunities with mean swell height greater than 2 feet were not included in the analysis of variance. Table 2-3 summarizes analysis of variance results for eight different data group pairings. These pairings were designed to determine whether the general data group headings mentioned above were appropriate based upon quantative statistical analysis. The null hypotheses tested in each case were that the two data groups being compared were not different in detection ranges achieved or in percent of targets detected. Cases where the null hypothesis could be rejected at the 0.05 significance level or less (that is, where there was no more than a 5-percent chance that the two data groups were similar) are denoted by the appropriate significance level in Table 2-3. Cases where the null hypothesis could <u>not</u> be rejected at the 0.05 significance level are denoted by "NS" in the table. Results of this analysis of variance indicate the following:

1. The AN/SPS-64(V) radar achieved significantly longer detection ranges than the AN/SPS-66, but did not detect a significantly larger percentage of the available targets (item a from Table 2-3).

Table 2-3. Results of Analyses of Variance Comparing Radars and Target Types

DATA GROUPS COMPARED	SIGNIFICANCE LEVEL OF DATA GROUP DIFFERENCES IN	
	DETECTION RANGES	PERCENT DETECTED
a. AN/SPS-64(V) versus AN/SPS-66 radar	.001	NS
b. Small boats with reflectors versus small boats without reflectors[1]	NS	.001
c. 7-man life rafts with reflectors versus 7-man life rafts without reflectors[1]	NS	.01
d. Small boats without reflectors versus 7-man life rafts without reflectors[1]	NS	NS
e. Small boats with reflectors versus 7-man life rafts with reflectors[1]	NS	NS
f. 4- to 6-man life rafts with conventional canopies versus 4- to 6-man life rafts with metallized fabric canopy	NS	NS
g. Small boats and 7-man life rafts without canopies or reflectors versus 4- to 6-man life rafts with canopies	NS	NS
h. All targets with reflectors versus all targets without reflectors[1]	NS	.001

[1]Target types represented by detection opportunities with mean swell height > 2 feet were eliminated for this comparison. (See Tables 3-1 and 3-2.)

NS denotes that the difference in sample means was not significant at the 0.05 level or less.

2. Small boats and 7-man life rafts, each equipped with a radar reflector, were detected a significantly greater percentage of times than those not equipped with reflectors. While no statistically significant differences in detection range were found between the two data groups, detection ranges were generally longer for reflector-equipped targets according to Tables 2-1 and 2-2 (items b and c).

3. Small boats equipped without radar reflectors were not different from 7-man life rafts without reflectors as radar targets. The same conclusion can be drawn for reflector-equipped targets (items d and e).

4. The metallized fabric canopy provided no significant improvement in the detectability of 4- to 6-man canopied life rafts (item f).

5. Small boats and 7-man life rafts without radar reflectors were not different from 4- to 6-man canopied life rafts as radar targets (item g).

6. Overall, targets equipped with radar reflectors were detected a significantly greater percentage of times than targets without radar reflectors (item h).

2.3 CDP AND LATERAL RANGE CURVES

2.3.1 CDP Curves

Based upon the analysis of variance discussed in Section 2.2, the detection run data were divided into eight groups as depicted in Figure 2-1. The 2-foot swell height cutoff point for grouping data was chosen based upon preliminary data sorts and field experience with sea return on the two radars.

CDP versus range curves for these data are presented in Figures 2-2 through 2-8 (pages 2-8 through 2-11). No CDP curve appears for the AN/SPS-66 radar searching for targets without radar reflectors in seas greater than 2 feet because only 1 of 22 targets was detected under those circumstances. Comparison of the CDP curves indicates that, with fairly calm seas, the CDP achieved by both radars is similar as range closes to near zero; however, the AN/SPS-64(V) radar made more of its detections at longer ranges than did the AN/SPS-66. As will be demonstrated in Section 2.4, this resulted in larger sweep widths for the AN/SPS-64(V). With greater than 2-foot seas, the

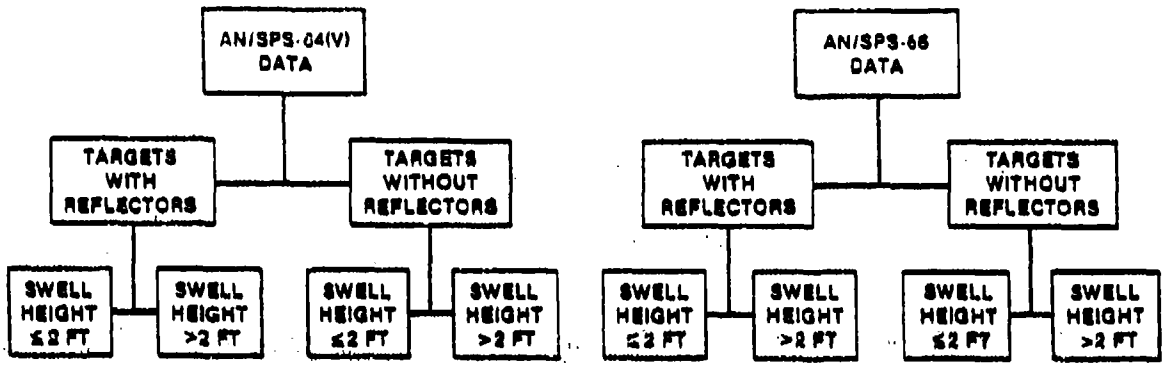


Figure 2-1. Division of Detection Run Data

AN/SPS-64(V) demonstrates a clear superiority in both detection ranges achieved and CDP attained. The curves also indicate that a radar reflector typically improved target CDPs at all ranges with both radars.

These CDP curves were used in conjunction with tracking run data to calculate operator factors for each data base as described in Chapter 1.

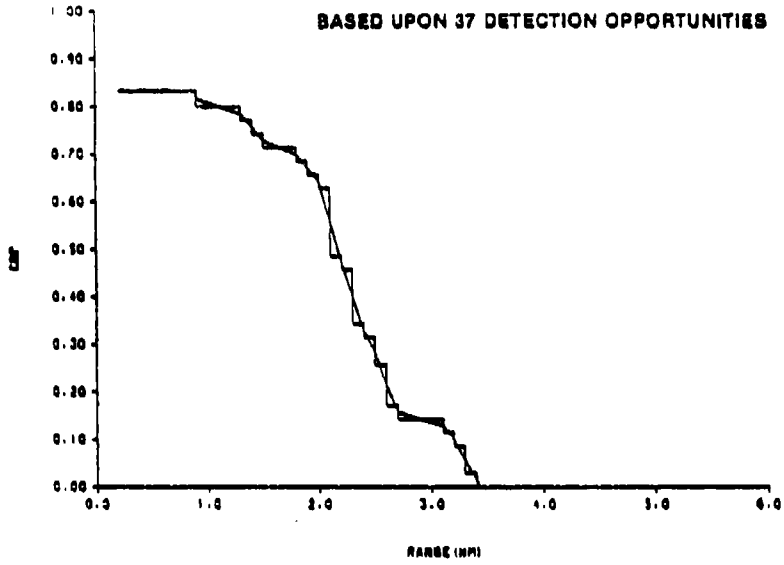


Figure 2-2. CDP Versus Range for AN/SPS-64(V) Searching for Small Boats and Life Rafts With Radar Reflectors (0- to 2-foot seas)

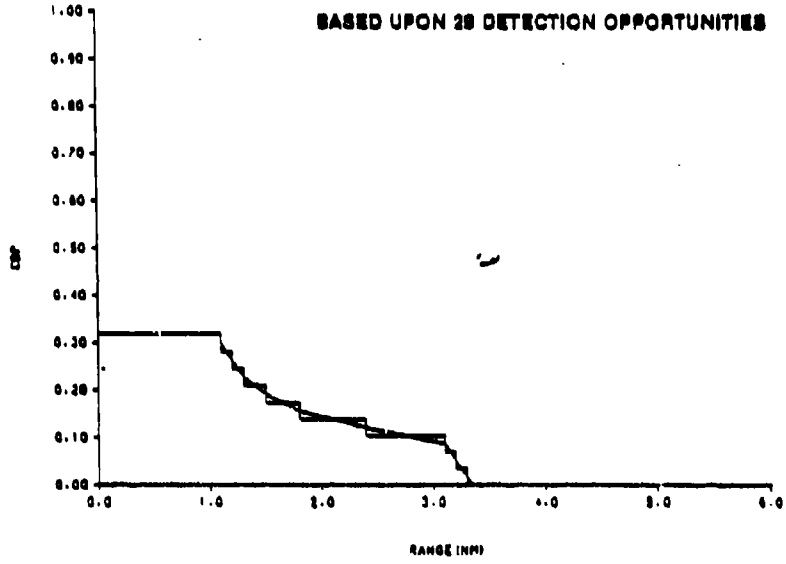


Figure 2-3. CDP Versus Range for AN/SPS-64(V) Searching for Small Boats and Life Rafts With Radar Reflectors (2.5- to 4-foot seas)

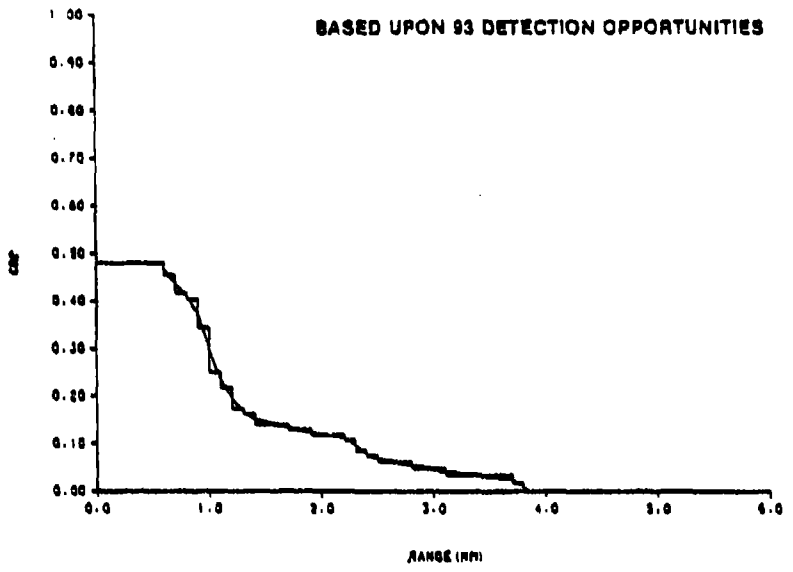


Figure 2-4. CDP Versus Range for AN/SPS-64(V) Searching for Small Boats and Life Rafts Without Radar Reflectors (0- to 2-foot seas)

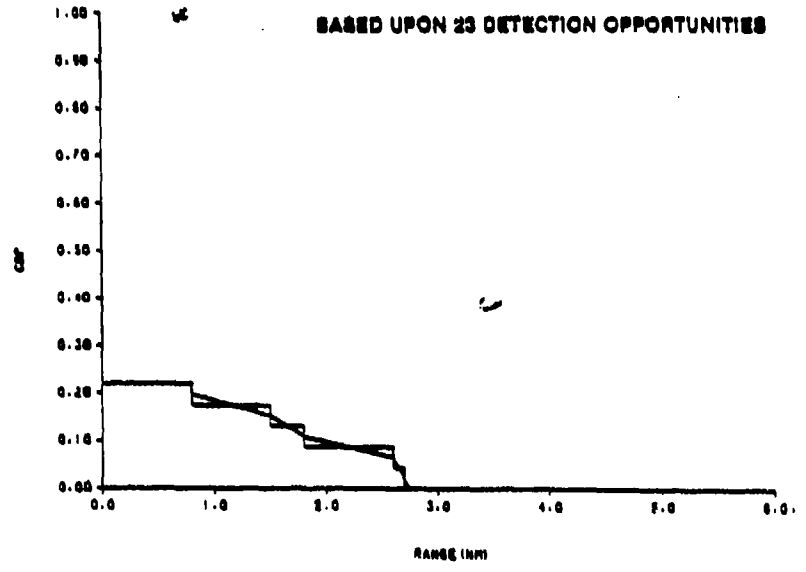


Figure 2-5. CDP Versus Range for AN/SPS-64(V) Searching for Small Boats and Life Rafts Without Radar Reflectors (2.5- to 4-foot seas)

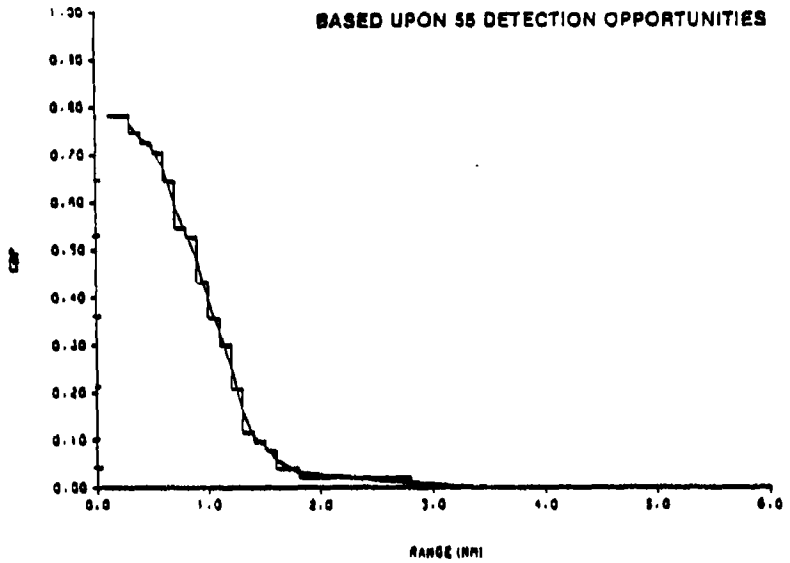


Figure 2-6. CDP Versus Range for AN/SPS-66 Searching for Small Boats and Life Rafts With Radar Reflectors (0- to 2-foot seas)

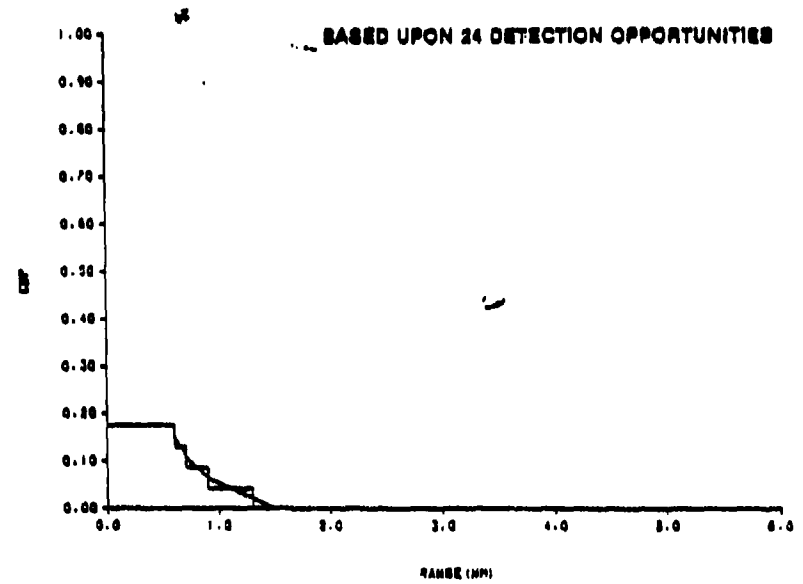


Figure 2-7. CDP Versus Range for AN/SPS-66 Searching for Small Boats and Life Rafts With Radar Reflectors (2.5- to 4-foot seas)

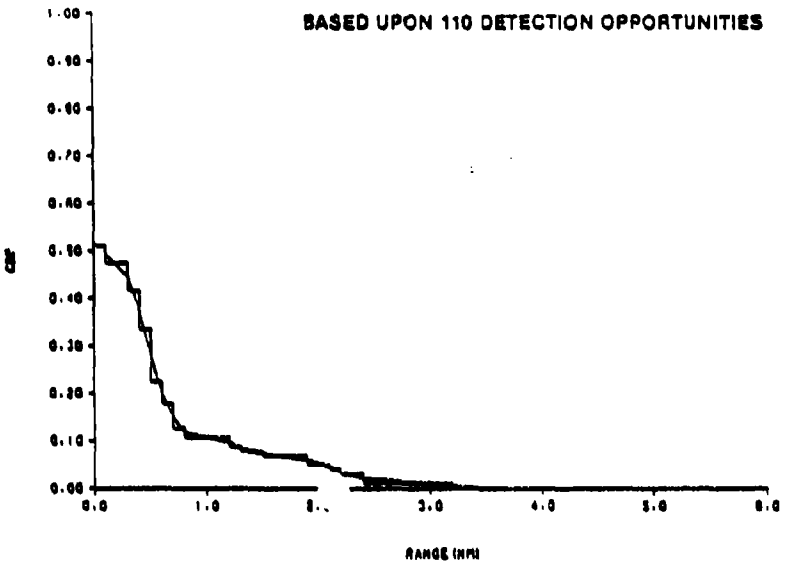


Figure 2-8. CDP Versus Range for AN/SPS-66 Searching for Small Boats and Life Rafts Without Reflectors (0- to 2-foot seas)

2.3.2 Lateral Range Curves

Figures 2-9 through 2-15 are lateral range curves that were generated for seven of the eight data groups of interest. The upper curve in each case was generated by integrating detection probability from maximum sensor range through CPA to maximum sensor range behind the search unit. The lower curve was generated by integrating only to CPA. The lower curve reflects the manner in which data were collected during the experiments. (As described in Chapter 1, the experimental design required the search unit to be prepared for the next target after one target passed CPA.) The higher curve probably represents an upper bound on what can be achieved in an actual search when radar operators scan the entire PPI display.

One assumption made in the lateral range curve calculations, which is not true for all searcher-target interactions during an actual search, is that each target path is a straight line parallel to the searcher's track. Actual searches for small targets do not often deviate substantially from this assumption during searcher-target interactions. Thus, differences between these lateral range curves and actual search performance should not be significant.

Comparisons of the lateral range curves shown in Figures 2-9 through 2-15 demonstrate the advantage that the AN/SPS-64(V) has over the AN/SPS-66 in search performance. Also, it can be seen that targets with radar reflectors provide a substantial improvement in probability of detection at all ranges compared to targets without reflectors.

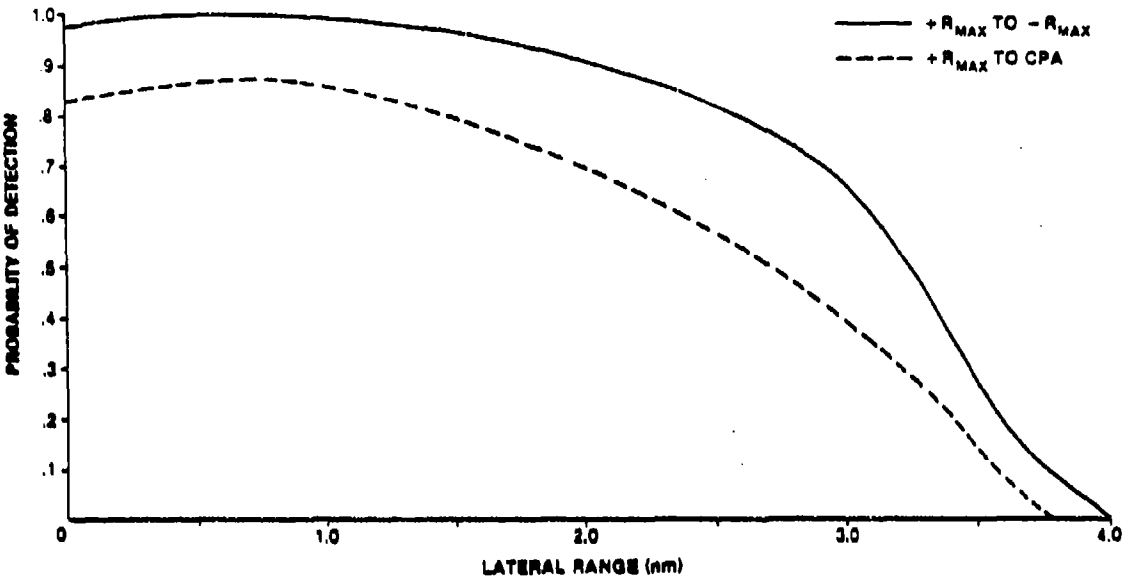


Figure 2-9. Lateral Range Curves for AN/SPS-64(V) Searching for Small Boats and Life Rafts With Radar Reflectors (0- to 2-foot seas)

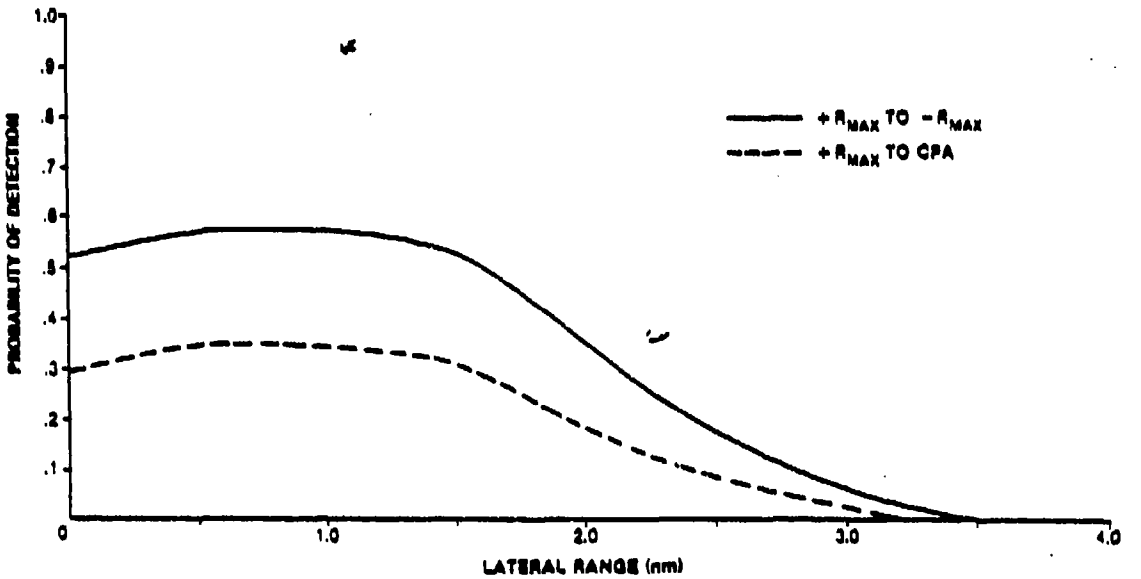


Figure 2-10. Lateral Range Curves for AN/SPS-64(V) Searching for Small Boats and Life Rafts With Radar Reflectors (2.5- to 4-foot seas)

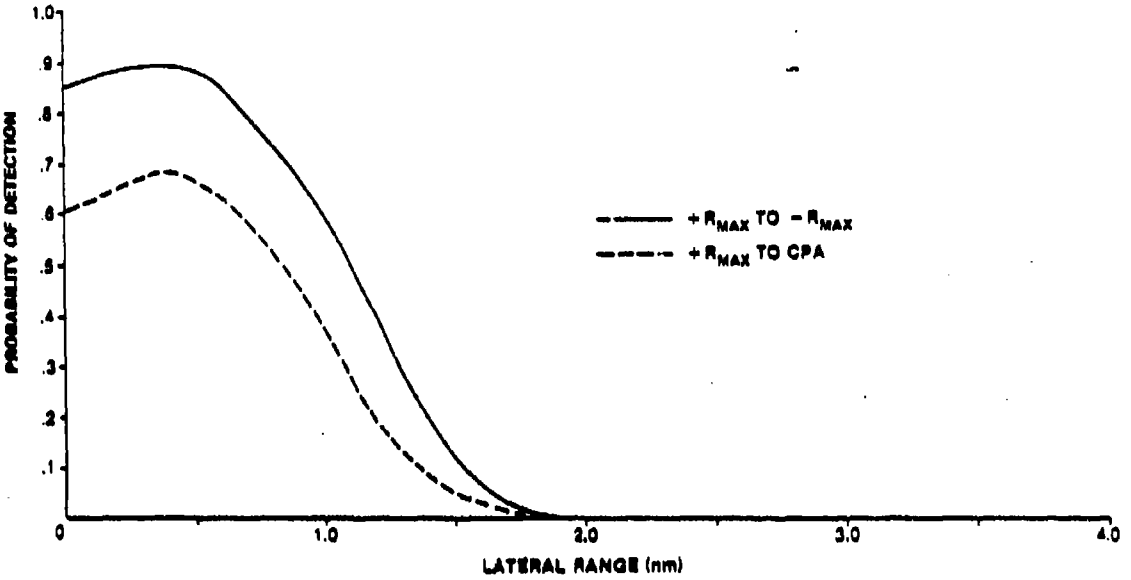


Figure 2-11. Lateral Range Curves for AN/SPS-64(V) Searching for Small Boats and Life Rafts Without Radar Reflectors (0- to 2-foot seas)

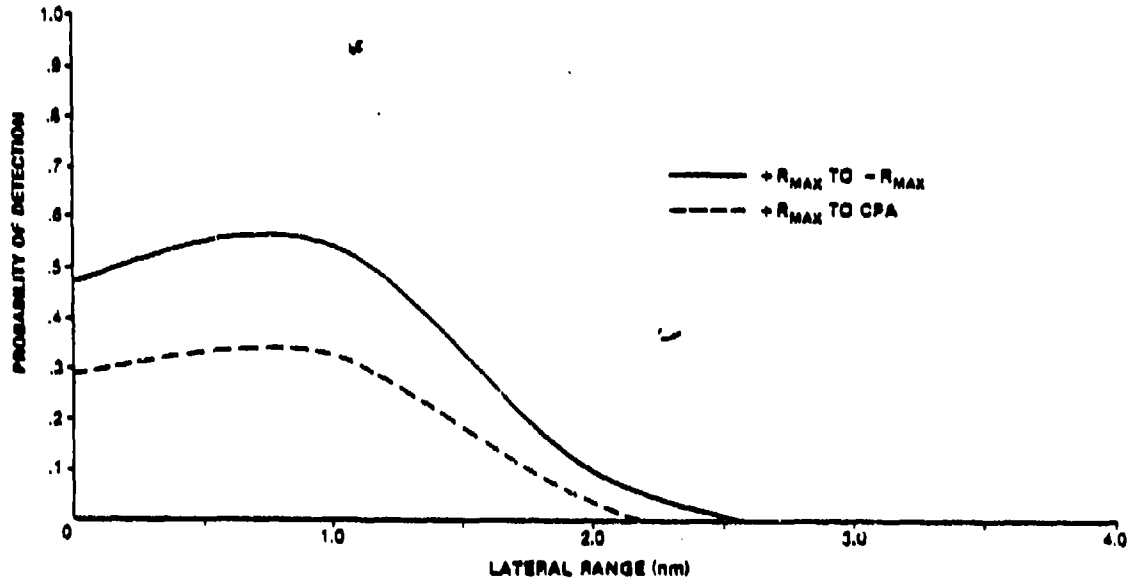


Figure 2-12. Lateral Range Curves for AN/SPS-64(V) Searching for Small Boats and Life Rafts Without Radar Reflectors (2.5- to 4-foot seas)

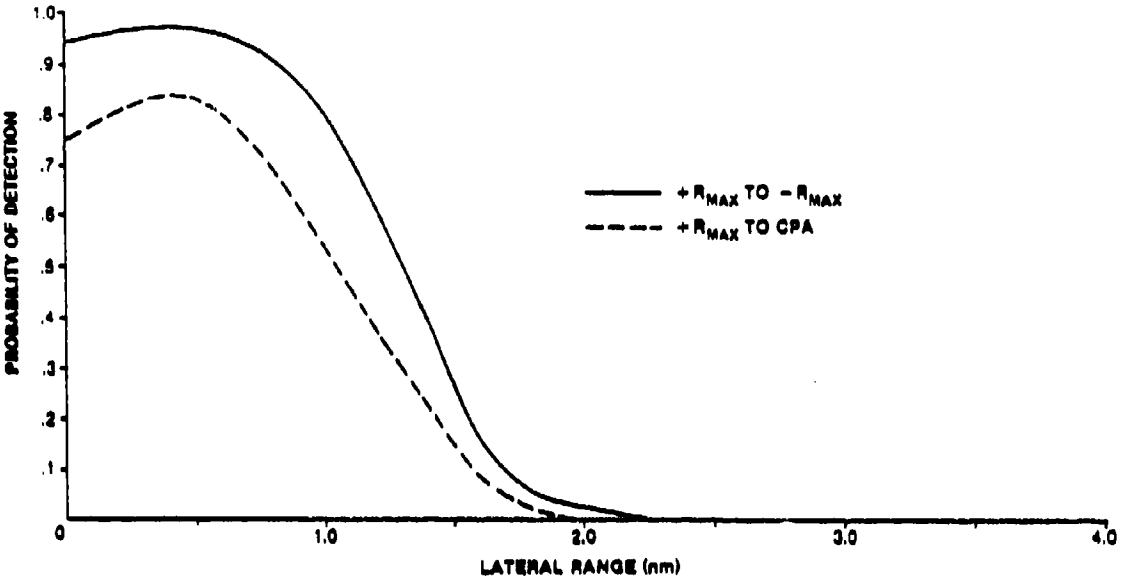


Figure 2-13. Lateral Range Curves for AN/SPS-66 Searching for Small Boats and Life Rafts With Radar Reflectors (0- to 2-foot seas)

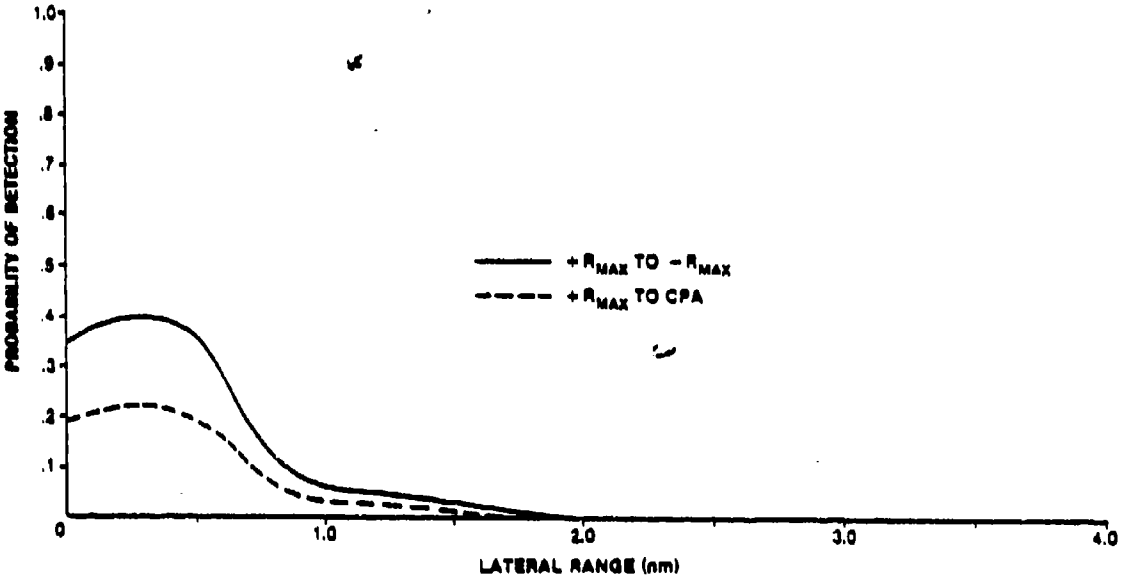


Figure 2-14. Lateral Range Curves for AN/SPS-66 Searching for Small Boats and Life Rafts With Radar Reflectors (2.5- to 4-foot seas)

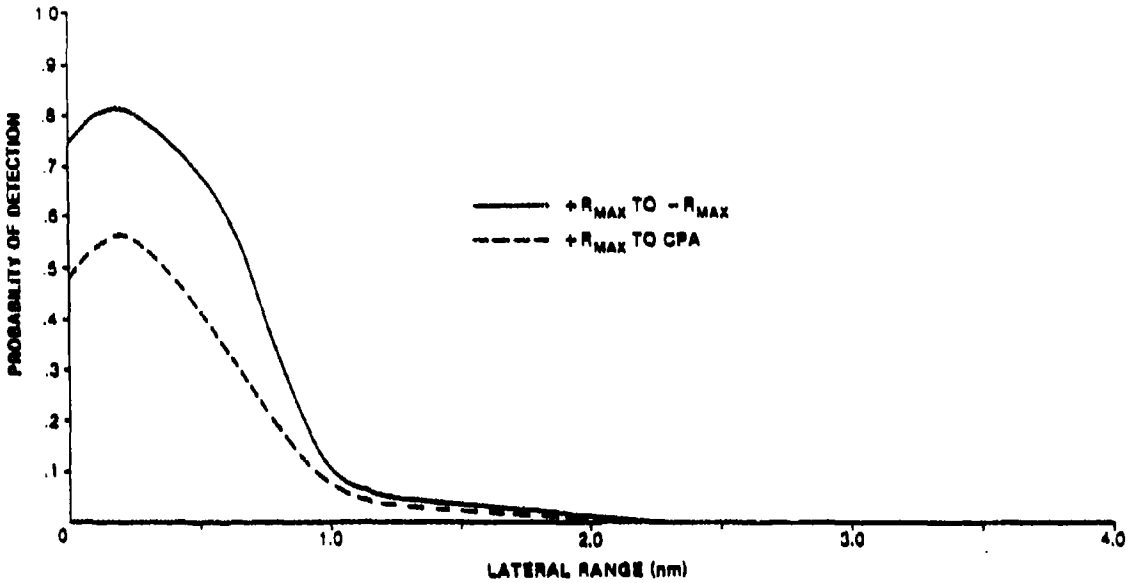


Figure 2-15. Lateral Range Curves for AN/SPS-66 Searching for Small Boats and Life Rafts Without Radar Reflectors (0- to 2-foot seas)

2.4 SWEEP WIDTHS

Table 2-4 presents sweep-width estimates for the eight data bases of interest. Sweep widths were calculated by integrating under the lateral range curves presented in Section 2.3.2. The number in the upper left corner of each box is a sweep-width estimate obtained assuming that the radar operator watches only the area forward of the beam. The lower right number assumes the entire PPI display is monitored with uniform effectiveness, and that target detection probability is the same forward and aft of the beam. In reality, neither assumption is likely to be entirely correct, and sweep widths for actual search missions probably lie between the two sets of values.

Table 2-4. Small-Target Sweep Widths for AN/SPS-64(V) and AN/SPS-66 Radars

TARGET TYPE	AN/SPS-64(V)		AN/SPS-66	
	SWELL HEIGHT ≤2 ft	SWELL HEIGHT >2 to 4 ft	SWELL HEIGHT ≤2 ft	SWELL HEIGHT >2 to 4 ft
Small Boats and Life Rafts without Radar Reflectors	1.4 / 2.0	1.1 / 1.8	0.8 / 1.3	~0 / ~0
Small Boats and Life Rafts with Radar Reflectors	5.0 / 6.3	1.6 / 2.7	2.0 / 2.5	0.4 / 0.6

NOTE: In each box, the upper left number reflects closing the target (R_{max} to CPA only), while the lower right number reflects closing and opening the target (R_{max} to CPA to $-R_{max}$).

2.5 RANGE SCALE

Figures 2-16 through 2-19 provide comparisons between the 3- and 6-nm range scale performance of the two radars. Combinations of radar/target type and sea conditions that were represented by data collected using both range scales were selected for these comparisons.

Figures 2-16 and 2-17 indicate that, while a few detections are made slightly beyond 3 nm using the 6-nm range scale of the AN/SPS-64(V), CDP is about the same for both scales at ranges between 1 and 2.5 nautical miles. Also, a 26 percent higher CDP is ultimately achieved using the 3-nm scale as range closes inside of 1 nautical mile.

Figures 2-18 and 2-19 indicate that, based upon very limited data, the 3-nm range scale of the AN/SPS-66 radar is clearly preferable to the 6-nm scale when searching for small targets. This combination should be accepted with some caution since only eight detection opportunities are represented in Figure 2-18 and only 10 opportunities are represented in Figure 2-19.

Both comparisons indicate that, when searching for weak targets such as small boats and life rafts, both radars perform better when set to the 3-nm range scale. Two possible reasons for this result are:

1. Resolution on the PPI display is best when a small area is being monitored with a high PRF. As discussed in Section 1.2, both radars use a higher PRF and achieve better resolution capability on the 3-nm range scale than on longer range scales. Resolution is especially important when attempting to distinguish a weak but relatively stationary contact from random sea-return speckle.

2. The false-contact rate may be higher when using the 6-nm range scale since more area is being covered and weak targets are less distinct. False contacts distract attention from the rest of the PPI display and reduce the probability of detecting the actual target.

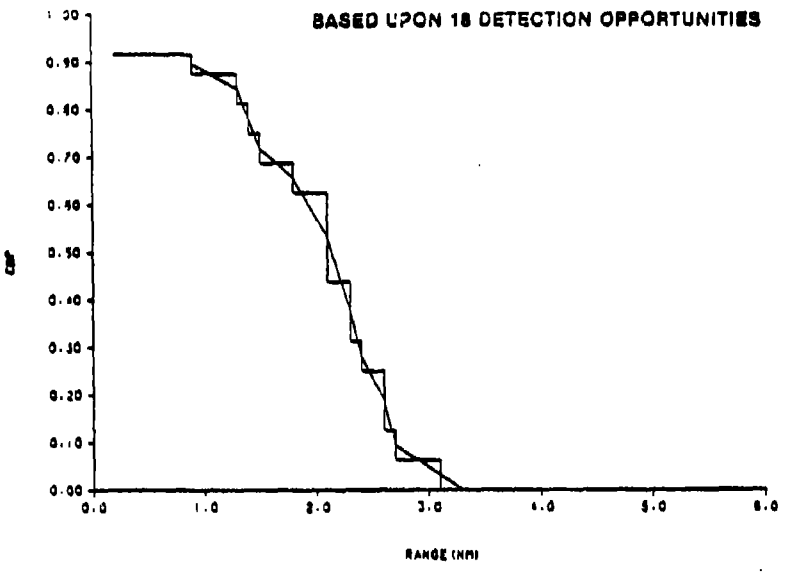


Figure 2-16. CDP Versus Range for AN/SPS-64(V) Searching for Small Boats and Life Rafts With Radar Reflectors on 3-nm Range Scale (0- to 2-foot seas)

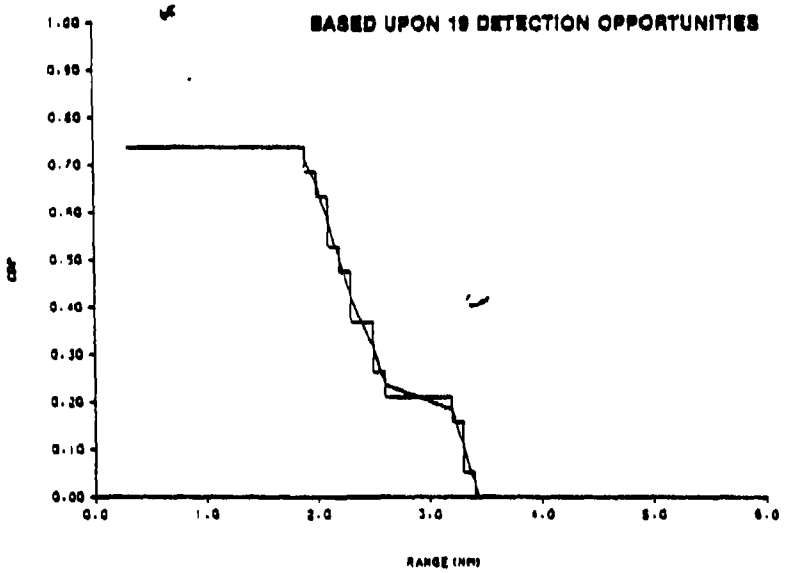


Figure 2-17. CDP Versus Range for AN/SPS-64(V) Searching for Small Boats and Life Rafts With Radar Reflectors on 6-nm Range Scale (0- to 2-foot seas)

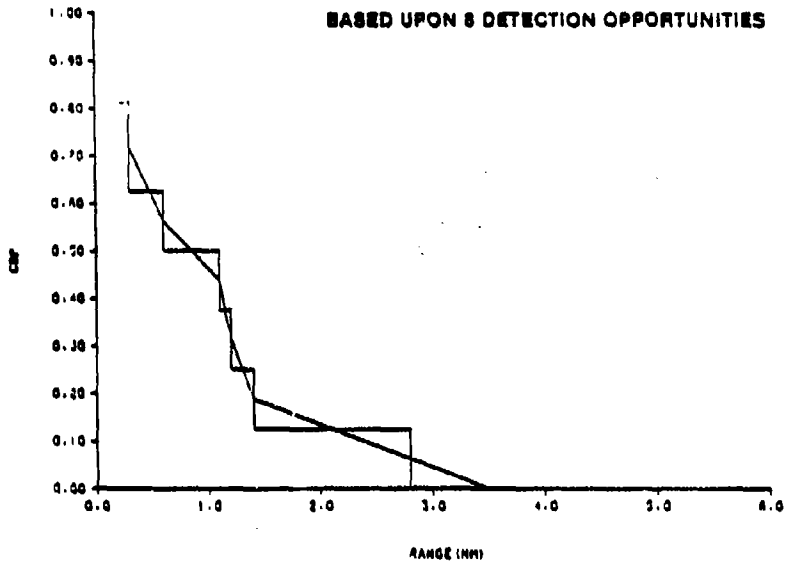


Figure 2-18. CDP Versus Range for AN/SPS-66 Searching for Small Boats and Life Rafts With Radar Reflectors on 3-nm Range Scale (1.5- to 2-foot seas)

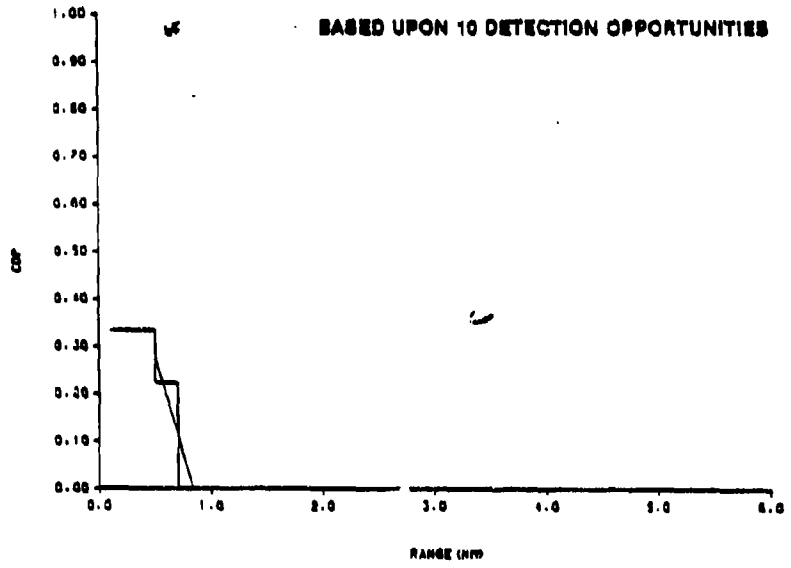


Figure 2-19. CDP Versus Range for AN/SPS-66 Searching for Small Boats and Life Rafts With Radar Reflectors on 6-nm Range Scale (1.5- to 2-foot seas)

2.6 COMPARISON OF AN/SPS-66 PERFORMANCE ABOARD 41-FOOT UTBs AND 95-FOOT WPBs.

Table 2-5 summarizes the performance achieved by AN/SPS-66 radars aboard several 41-foot UTBs and the 95-foot WPB CAPE FAIRWEATHER during four days of tracking runs. The computerized analysis of variance routine described previously was used to compare detection performance achieved by the two vessel types with this radar. Initial detection ranges achieved by the 95-foot WPB were found to be greater than those achieved by the 41-foot UTBs at the .005 significance level. Percentage of targets detected was higher for the 95-foot WPB at the .001 significance level. Based upon information provided by personnel at the operational units involved and basic radar operating principles, three major factors may possibly be responsible for this difference in detection performance:

1. Height of radar antenna. Antenna height on the 95-foot WPB is approximately 40 feet while antenna height on the 41-foot UTB is approximately 15 feet. Low freeboard targets such as small boats and life rafts are likely to be exposed to the radar beam a larger percentage of time with the higher antenna at close range.

2. Quality and frequency of maintenance. Ninety-five-foot WPBs typically have more experienced electronics personnel available at more regular intervals for radar maintenance than do 41-foot UTB stations.

3. Experience and training of radar operators. Radar operators aboard 95-foot WPBs are typically the commanding officer or officer-of-the-deck. These individuals are generally more experienced than crewmen aboard 41-foot UTBs and are more likely to have received some training in proper radar utilization.

Since the AN/SPS-64(V) will eventually replace the remaining AN/SPS-66 radars aboard 95-foot cutters, it is worth comparing CAPE FAIRWEATHER's performance to that of 82-foot WPBs that were also searching on two of the four days in question. The 82-foot cutters detected 11 of 12 reflector-equipped

Table 2-5. Comparison of AN/SPS-66 Performance Aboard 41- and 95-Foot Coast Guard Vessels During Tracking Runs

AN/SPS-66 PERFORMANCE DURING TRACKING RUNS		SEARCH UNIT TYPE	
		41-foot UTB	95-foot WPB
TARGETS WITHOUT REFLECTORS	NUMBER OF OPPORTUNITIES	29	18
	NUMBER OF DETECTIONS	8	14
	PERCENT DETECTED	28	78
	MEAN INITIAL DETECTION RANGE (nm)	0.9	0.8
TARGETS WITH REFLECTORS	NUMBER OF OPPORTUNITIES	34	24
	NUMBER OF DETECTIONS	24	24
	PERCENT DETECTED	71	100
	MEAN INITIAL DETECTION RANGE (nm)	1.1	1.7
OVERALL	NUMBER OF OPPORTUNITIES	63	42
	NUMBER OF DETECTIONS	32	38
	PERCENT DETECTED	51	90
	MEAN INITIAL DETECTION RANGE (nm)	1.1	1.4

NOTE: Data were collected under good weather conditions (swell height $\leq$2 ft; clear) during four days when both unit types were searching simultaneously.

targets (92 percent) at a mean range of 2.9 nm and 10 of 12 targets (83 percent) without reflectors at a mean range of 1.4 nautical miles. This represents an expected improvement in detection range over the AN/SPS-66, with approximately the same probability of detection achievable for targets that are closed to small CPAs.

As Section 2.4 has already indicated, larger radar sweep widths can be expected for 95-foot WPBs after they are fitted with the AN/SPS-64(V).

2.7 TARGET RADAR CROSS SECTIONS

The radar range equation, described in Chapter 1, was used to determine radar cross sections for the two target types tested during the experiments. Table 2-6 contains the values of each term in the range equation for both the AN/SPS-64(V) and AN/SPS-66 radars.

Values of radar system parameters were obtained from References 2, 3, 11, and 12. System parameter values used in these calculations are for the 3-nm range scale of both radars. The 3-nm range scale was chosen because it was shown to be preferable to the 6-nm scale in Section 2.6 and a majority of detection runs were made with the 3-nm scale selected.

Values of $R_{.10}$ and $R_{.25}$ were estimated from detection run data by binning the data on radar type, target type, swell height, and range. Since values of $R_{.10}$ and $R_{.25}$ were found to be sensitive to the range bin size selected, calculations using several binning schemes were averaged to obtain target radar cross-section estimates. Only data collected in seas of 2 feet or less were used to obtain $R_{.10}$ and $R_{.25}$ values because instantaneous probability of detection never exceeded 10 percent in seas greater than 2 feet.

Radar cross-section estimates obtained for the targets tested are given in Table 2-7. These estimates demonstrate that using reflective devices of the types tested during the experiments can increase small target radar cross sections by at least one order of magnitude.

Table 2-6. Radar Range Equation Parameters for AN/SPS-64(V) and AN/SPS-66 Radars

RADAR RANGE EQUATION PARAMETER	AN/SPS-64(V) VALUES		AN/SPS-66 VALUES	
	(metric units)	(decibels)	(metric units)	(decibels)
Peak Transmitter Power (P_t)	20 kW	13.0	7 kW	8.5
Pulse Width (τ)	0.06/0.5 μsec	-12.2/-3.0	0.1/0.6 μsec	-10/-2.2
Transmitter/Receiver Gain (G)	-	28.5	-	24.0
Frequency (f)	9420 MHz	39.7	9375 MHz	39.7
System Noise Temperature (T_s)	5635°K	37.5	4070°K	36.1
Bandwidth Correction (C_B)	-	2.0/3.0	-	2.0/4.0
Transmitter Loss (L_t)	-	2.9	-	0.5
Beamshape Loss (L_p)	-	1.6	-	1.6
Required Signal-to-Noise Ratio for $R_{.10}$, P_{FA} = .001 (V_o)	-	-7.3/-5.6	-	-4.9/-3.1
Required Signal-to-Noise Ratio for $R_{.25}$, P_{FA} = .001 (V_o)	-	-5.2/-3.6	-	-2.9/-1.0

NOTE: Where multiple values are listed, they are for the 3-nm/6-nm range scales. Target radar cross sections were calculated using the 3-nm range scale parameter values.

Table 2.7. Target Radar Cross-Section Estimates, σ

TARGET TYPE	σ (dB)	σ (m^2)
Small boats and life rafts without radar reflectors	-20.6	.0088
Small boats and life rafts with radar reflectors	-7.4	.18

Using the target cross sections obtained above, the radar range equation can be solved again to estimate search performance under less favorable conditions. The following three terms come into play when solving the radar range equation for more severe weather conditions (Reference 11):

1. Visibility factor (V_o). Also referred to as "required signal-to-noise ratio," V_o depends on the false-alarm probability, P_{FA}, acceptable to the radar operator when a certain value of target detection probability is desired. P_{FA} depends upon the PPI display gain control settings; it increases with the amount of background noise present. To detect weak signals from small targets at all, the gain controls must be set fairly high. This results in a very noisy PPI display when seas become even moderately rough. A P_{FA} of .001 was chosen for the fair-weather solution of the range equation (Reference 11). Experience during the experiments demonstrated that, in seas greater than 2 feet, adjusting gain so that sea clutter was acceptable almost completely eliminated the chance of detecting an actual target. Therefore, while V_o can be lowered for larger targets with only moderate increases in P_{FA}, doing so with small weak targets simply results in a very rapid increase in P_{FA} to near unity; that is, the targets become virtually indistinguishable from the sea return.

2. Atmospheric attenuation loss (L_{at}). This term was small enough to ignore in the clear-weather calculations because of the short detection ranges involved. In moderate (4 to 5 mm/hr) rain, L_{at} is approximately 0.5 dB/nm for both radars and in heavy (16 mm/hr) rain, L_{at} is about 1.9 dB/nm (Reference 11).

3. Storm clutter. An estimate of range reduction due to storm clutter on the PPI display is given in Reference 11 to be

$$R^4 = \frac{R_o^4}{1+C/N}$$

where:

R = detection range in clutter
R_o = detection range without clutter
C = clutter power
N = noise power.

Assuming moderate rain and detection ranges of approximately 1 nm, C/N was calculated to be approximately 9.5 for the AN/SPS-64(V) and 6.4 for the AN/SPS-66. With these C/N ratios, R/R_o is approximately .56 for the AN/SPS-64(V) and .61 for the AN/SPS-66. In heavy rain, C/N becomes 87 for the AN/SPS-64(V) and 58 for the AN/SPS-66. Corresponding values of R/R_o are .33 and .36. The reader is reminded that this calculation assumes rain clutter can be adjusted to an acceptable level on the PPI display without eliminating small target echoes.

Including appropriate L_{at} values in the radar range equation and allowing for storm clutter will provide estimates of how much detection range degradation can be expected in precipitation (with calm seas) for small targets. Table 2-8 provides some example results of such calculations. The reader will recall from the CDP curves in Section 2.2.1 and the discussion in Section 1.4.5 that detections are seldom made (CDP does not usually increase) inside 0.2- to 0.3-nm range due to excessive sea return near own ship on the PPI display. Thus, predicted values of $R_{.10}$ which are less than 0.2- to 0.3-nm are indicative of no significant target detection probability; that is, the target is completely masked in clutter. Detection ranges in heavy fog lie between those for moderate and heavy rain, while wet, heavy snow will cause more attentuation than heavy rain (Reference 11).

Table 2-8. Detection Range ($R_{.10}$) Estimates (in nm) for Small Targets in Precipitation

TARGET TYPE	AN/SPS-64(V)			AN/SPS-66		
	CLEAR WEATHER	MODERATE RAIN	HEAVY RAIN	CLEAR WEATHER	MODERATE RAIN	HEAVY RAIN
Small boats and life rafts without reflectors	1.20	0.65	0.35	0.89	0.52	0.29
Small boats and life rafts with reflectors	2.55	1.35	0.68	1.90	1.10	0.54

CHAPTER 3

CONCLUSIONS AND RECOMMENDATIONS

3.1 CONCLUSIONS

3.1.1 Summary

The following conclusions concerning SVR search for small targets are based upon results presented in Chapter 2:

- o Radar type. Search units equipped with the AN/SPS-64(V) radar detected small targets at significantly longer ranges than did units equipped with the AN/SPS-66. Similar CDPs were achieved with both radars for targets with close CPAs.

- o Radar reflectors. With the exception of the metallized fabric canopy, all radar reflectors tested provided significant improvements in target detection probability. Limited data indicated that a 6-foot steel post improved radar detectability as much as some radar reflectors.

- o Environmental conditions. Swell height, which determines the amount of sea-return clutter present on the PPI display, significantly reduced radar search performance. The effect of this parameter far outweighed the influence of other variables listed in Chapter 1 over the range of values tested.

- o Sweep widths.

  1. Sweep widths for search units with the AN/SPS-64(V) are approximately twice those for units with the AN/SPS-66 in calm (0- to 2-foot) seas. In rougher (2.5- to 4-foot) seas, AN/SPS-64(V)

sweep widths are four to five times greater than those achieved with the AN/SPS-66.

2. In calm seas, radar reflectors tripled the sweep widths achievable by search craft with the AN/SPS-64(V); sweep widths with the AN/SPS-66 were doubled by the use of a radar reflector. Sweep widths were increased about 50 percent with the AN/SPS-64(V) when a radar reflector was used in rough seas. Seach units equipped with the AN/SPS-66 were unable detect a small target in rough seas unless the target was equipped with a radar reflector.

3. Rough seas reduced AN/SPS-64(V) sweep widths 10 to 20 percent for small targets without radar reflectors and 60 to 70 percent for targets with radar reflectors. The AN/SPS-66 radar was not an effective small target search sensor in seas greater than 2 feet.

- Range scales. With both the AN/SPS-64(V) and AN/SPS-66 radars, the 3-nm range scale provided better search performance than the 6-nm scale.

- 95-Foot WPBs. Limited data collected in calm seas indicated that 95-foot WPBs achieved better search performance than 41-foot UTRs when both were equipped with the AN/SPS-66 radar. Installation of the AN/SPS-64(V) on 95-foot WPBs should provide a significant improvement in small-target detection range capability and sweep width.

- Radar equation.

1. Heavy sea-return clutter (in seas greater than 3 to 4 feet) could not be reduced to an acceptable level on either SVR without reducing radar sensitivity below that required for small-target detection. Thus, the radar range equation should be applied to small targets only for low sea states.

2. The effects of precipitation on detection ranges achievable with small targets can be calculated using radar cross sections presented in Section 2.6.

3.1.2 Discussion: Radar Detection Model

Range/detection probability relationships and sweep widths for various radars, targets, and environmental conditions can be extrapolated from field data using the radar range equation and target radar cross sections.

As discussed in Section 1.4.4, lateral range curves can be developed if instantaneous detection probability as a function of range is known. Probability of detection for a target that closes to some lateral range x, denoted P(x), is a summation of instantaneous detection probabilities (see Figure 1-2).

When data from detection and tracking runs are not available to calculate operator factors and glimpse probabilities (Section 1.4.3) for a full range of environmental conditions, but target radar cross section is known from data collected over a limited range of conditions, instantaneous target detection probability as a function of range can be estimated using the radar range equation discussed in Section 1.4.6. For a variety of parameter combinations, the ranges at which instantaneous detection probability attains selected values, that is, $R_{.05}$, $R_{.10}$, $R_{.20}$, etc., can be solved for in the radar range equation by adjusting the values of V_o, L_{at}, and R/R_o (Section 2.7) as appropriate. Once this is done, a lateral range curve can be developed by replacing

$$P(x) = 1 - e^{-\frac{60apo}{vx}\int_{\substack{y=0\\ \text{or}\\ y=-\sqrt{R_m^2-x^2}}}^{y=+\sqrt{R_m^2-x^2}} \frac{\Psi^2}{\left(\sqrt{y^2+x^2}\right)} ydy}$$

with

$$P(x) = 1 - e^{-\frac{60a}{vx}\int_{\substack{y=0 \\ \text{or} \\ y=-\sqrt{R_m^2-x^2}}}^{y=+\sqrt{R_m^2-x^2}} P_{(\sqrt{y^2+x^2})}\, y\,dy}$$

where:

$P_{(\sqrt{y^2+x^2})}$ = Instantaneous target detection probability at range $r = \sqrt{y^2+x^2}$.

Once the lateral range curve is obtained, sweep width can be determined by integration as described in Section 1.4.5.

When this technique is applied, the following assumptions must be made:

1. In adverse weather conditions, sea and/or storm clutter on the PPI display can be reduced to an acceptable level without eliminating target echoes. This assumption can be made for swell heights of up to 3 to 4 feet with the small targets tested during the experiments. With larger targets, the assumption can probably be made in more severe conditions.

2. The instantaneous detection probabilities specified for range calculations are reasonable to expect considering the target type, radar, and environmental conditions involved. For example, if field data collected in clear, calm weather demonstrated that instantaneous detection probability never exceeds 30 percent at any range, $R_{.50}$ should not be calculated for the same target/radar combination in heavy rain.

3. Instantaneous detection probability as a function of range behaves similarly over a broad range of conditions for a given target type. For example, if field data indicated the type of relationship depicted by the solid line in Figure 3-1 for clear weather, then the type of relationship depicted by the dashed line would be expected in adverse weather.

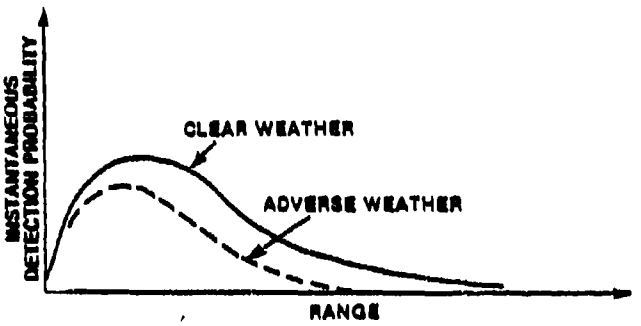


Figure 3-1. Example of Expected Range/Detection Probability Relationships for Clear and Adverse Weather

3.2 RECOMMENDATIONS

3.2.1 Search Guidance

The following recommendations for SVR search planning and conduct are based upon experiment results:

- Sweep width. The small-target radar sweep widths presented in Table 2-4 should be included in Section 846, Electronic Sweep Widths, of the National SAR Manual (Reference 10).

- Range scale. The 3-nm range scale on both the AN/SPS-64(V) and AN/SPS-66 radars should be used to search for small boats and life rafts.

- Employment of SVR. The decision of whether or not to utilize SVR in a search scenario, especially if it requires dedicating to the PPI display a crewperson who may be needed for other duties (such as visual scanning), should be based upon a comparison of SVR sweep width to those for other available sensors.

  Since visual scanners and SVR are currently the only search sensors available aboard most Coast Guard vessels, a sweep width comparison for small targets is provided in Table 3-1 to aid in the decision-making process. Visual sweep widths are taken from Reference 6 and SVR sweep widths are taken from Table 2-4 of this report.

  Table 3-1 demonstrates that visibility, sea state, and target characteristics are the primary factors to consider when deciding if SVR search will be worthwhile. SVR search will generally be preferred when visibility is poor, sea state is low to moderate, and the target is equipped with a radar reflector. The reader will note that the AN/SPS-64(V) radar performs better than visual scanners over a wider range of environmental conditions than the AN/SPS-66. Based upon results presented in Section 2.7, one would expect SVR sweep widths to deteriorate rapidly with the onset of precipitation and/or seas greater than 4 feet. Under these conditions, visual search is probably preferable to SVR search although very little empirical data exists to confirm this expectation.

  When visual and SVR sweep widths are similar, the decision of whether or not to use radar as a search sensor should be based upon other considerations such as navigation requirements or crew availability. A combined visual/electronic detection model, when developed, will provide a quantitative means of determining when SVR search can improve POD over that for visual search alone.

Table 3-1. Comparison of Visual and SVR Sweep Widths (in nm)

SENSOR	TARGET DESCRIPTION	VISIBILITY/CLOUD COVER					
		10 nm/0%		5 nm/50%		1 nm/100%	
		WIND SPEED/SWELL HEIGHT		WIND SPEED/SWELL HEIGHT		WIND SPEED/SWELL HEIGHT	
		≤10kt/≤1ft	15kt/2-3ft	≤10kt/≤1ft	15kt/2-3ft	≤10kt/≤1ft	15kt/2-3ft
VISUAL SCANNERS 82-foot MPB / 41-foot UTB	16-foot white boat or 4- to 6-man life raft with orange canopy	4.6[1] / 3.3	2.2[1] / 1.7	3.2[1] / 2.6	1.2[2] / 1.2	1.2[2] / 1.2[1]	0.4[2] / 0.4[1]
	16-foot blue boat or 7-man orange life raft without canopy	4.0[1] / 2.7	1.7[1] / 1.3	2.6[1] / 2.2[1]	0.9[2] / 0.9	1.0[2] / 1.0[2]	0.3[2] / 0.3[1]
	7-man black life raft	3.7[1] / 2.6	1.5[2] / 1.2	2.4[1] / 2.0[1]	0.8[2] / 0.8	0.9[2] / 0.9[2]	0.3[2] / 0.3[1]

RADAR TYPE	TARGET DESCRIPTION	SWELL HEIGHT	
		0 to 2 ft	2.5 to 4 ft
AN/SPS-64(V) (82-foot MPB)	Small boats and life rafts without radar reflectors	2.0	1.8
	Small boats and life rafts with radar reflectors	6.3	2.7
AN/SPS-66 (41-foot UTB)	Small boats and life rafts without radar reflectors	1.3	-0
	Small boats and life rafts with radar reflectors	2.5	0.6

NOTES: Time on task (time searching) is assumed to be 2 to 4 hours for all visual sweep widths.

Radar sweep width calculations assume that the target moves from R_{max} ahead of the search unit through CPA to $-R_{max}$ beyond the search unit along a straight path and that the radar operator scans the entire PPI display uniformly. No precipitation effects are considered.

[1]Radar search is preferred only if the target has a radar reflector.

[2]Radar search is preferred even if the target has no radar reflector.

- o Supplementary visual search. Visual scanners should concentrate on the area in the immediate vicinity of the search unit during low-visibility SVR searches. This procedure will avoid missing targets that pass through the area of heavy sea return near own ship.

- o Manual POD prediction. Small-target POD for SVR searches should be calculated manually using the sweep widths presented in Table 2-4 and the method described in the National SAR Manual (Reference 10) for visual search POD prediction. Sweep widths for other targets, radars, and environmental conditions should be incorporated into the SAR Manual as they become available so that this method can be applied to a broader range of search scenarios.

- o CASP POD prediction. The Coast Guard CASP model should incorporate the radar detection model described in Section 3.1.2 to compute POD for SVR searches. For any scenario, the CASP model can "conduct" a simulated SVR search to compute probability of detection.

3.2.2 Safety

To improve SVR detection probability, effective radar reflective devices should be required safety equipment on small vessels and survival craft.

3.2.3 Future Evaluations

Future Coast Guard SVR evaluations should include the following:

- o Tests should be conducted to determine if AN/SPS-64(V) sweep widths presented in Table 2-4 apply to other Coast Guard cutters, that is, WMECs and WHECs.

- o Tests should be conducted with larger (>20-foot) targets to develop lateral range curves and sweep widths. Also, published radar cross

sections for larger targets, such as those given in Reference 11, should be validated.

- Future tests should include target craft constructed of metal and wood as well as other materials already tested.

- Combined electronic and visual detection models should be developed.

- Target radar cross sections and range/detection probability relationships developed in future tests should be incorporated into the CASP model.

- Lateral range curves and sweep widths for a variety of common SAR targets and radars should be developed for representative environmental conditions using the method described in Section 3.1.2 and available target cross section data. These should be included in the National SAR Manual as they become available.

- The Coast Guard should continue testing commercially available radar reflective devices.

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APPENDIX A

RAW DATA

This appendix contains raw data files for individual SVR search units on a daily basis. Aggregate files were created for analysis using the data listed herein.

Pages A-2 and A-3 contain keys to the format of the data files. Detection run data begin on page A-4; tracking run data begin on page A-17.

KEY FOR DETECTION RUN DATA

Column 1: Detection (1 = yes, 0 = no)

Column 2: Range at Start of Run (nautical miles)

Column 3: Detection Range or CPA Range for Miss (nautical miles)

Column 4: Radar Range Scale (nautical miles; 0 denotes unknown)

Column 5: Wind Speed (knots)

Column 6: Swell Height (feet)

Column 7: Precipitation (0 = none; 1 = light/moderate rain; 2 = heavy rain)

Column 8: Relative Humidity (percent)

Column 9: Relative Wave Direction (-1 = not recorded; 0 = opposite vessel course; 1 = with vessel course; 2 = perpendicular to vessel course)

Column 10: Target Type (see below)

Column 11: Search Speed (knots)

TARGET CODES

Small Fiberglass Boats

1 = without equipment
2 = with wooden mast
3 = with engine
4 = with steel post
5 = with steel post and Echomaster Reflector
6 = with wooden mast and Echomaster Reflector
7 = with wooden mast and Davis Emergency Reflector
8 = with wooden mast and Radark Reflector

7-Man Life Rafts without Canopies

21 = without equipment
22 = with wooden post
23 = with steel post
24 = with steel post and Echomaster Reflector
25 = with steel post and Morin Reflector
26 = with wooden mast and Echomaster Reflector
27 = with wooden mast and Davis Emergency Reflector
28 = with wooden mast and Morin Reflector
29 = with wooden mast and Radark Reflector

4- to 6-Man Life Rafts with Canopies

30 = conventional canopy
31 = metallized fabric canopy

KEY FOR TRACKING RUN DATA

Column 1: Detection (1 = yes, 0 = no)

Column 2: Upper Limit of 0.2 nm Range Bin (nautical miles)

Column 3: Number of Scans in Range Bin

Column 4: Number of Contacts in Range Bin

Column 5: Radar Range Scale (nautical miles)

Column 6: Wind Speed (knots)

Column 7: Swell Height (feet)

Column 8: Precipitation (0 = none; 1 = light/moderate rain; 2 = heavy rain)

Column 9: Relative Humidity (percent)

Column 10: Relative Wave Direction (-1 = not recorded; 0 = opposite vessel course; 1 = with vessel course; 2 = perpendicular to vessel course)

Column 11: Target Type (see below)

Column 12: Search Speed (knots)

TARGET CODES

Small Fiberglass Boats

1 = without equipment
2 = with wooden mast
3 = with engine
4 = with steel post
5 = with steel post and Echomaster Reflector
6 = with wooden mast and Echomaster Reflector
7 = with wooden mast and Davis Emergency Reflector
8 = with wooden mast and Radark Reflector

7-Man Life Rafts without Canopies

21 = without equipment
22 = with wooden post
23 = with steel post
24 = with steel post and Echomaster Reflector
25 = with steel post and Morin Reflector
26 = with wooden mast and Echomaster Reflector
27 = with wooden mast and Davis Emergency Reflector
28 = with wooden mast and Morin Reflector
29 = with wooden mast and Radark Reflector

4- to 6-Man Life Rafts with Canopies

30 = conventional canopy
31 = metallized fabric canopy

41342	5/12/80		SPS-66							
1	.90	.50	.00	7.00	1.00	.00	94.00	-1.00	3.00	15.00
1	3.40	.70	1.50	5.00	2.00	.00	85.00	-1.00	21.00	15.00
0	2.80	.30	1.50	5.00	1.00	.00	85.00	-1.00	1.00	15.00
0	4.10	.50	1.50	.00	2.00	.00	85.00	-1.00	21.00	15.00
0	4.10	1.10	1.50	5.00	2.00	.00	85.00	-1.00	1.00	15.00
41385	5/12/80		SPS-66							
1	3.40	.30	.00	10.00	1.00	1.00	100.00	-1.00	21.00	15.00
1	3.60	.30	.00	3.00	1.00	.00	100.00	-1.00	21.00	15.00
0	6.70	1.40	.00	10.00	1.00	1.00	100.00	-1.00	1.00	15.00
0	5.50	.70	.00	3.00	1.00	.00	100.00	-1.00	1.00	15.00
0	2.40	.10	.00	10.00	1.00	1.00	100.00	-1.00	21.00	15.00
1	1.00	.40	.00	5.00	1.00	.00	89.00	-1.00	1.00	15.00
1	3.80	.10	.00	5.00	2.00	.00	89.00	-1.00	1.00	15.00
0	3.50	.80	.00	5.00	1.00	.00	75.00	-1.00	21.00	15.00
0	4.00	1.30	.00	5.00	1.00	.00	85.00	-1.00	1.00	15.00
0	4.20	.30	.00	5.00	2.00	.00	89.00	-1.00	21.00	15.00
PT. BONITA	5/12/80		SPS-HWY							
1	2.80	2.40	3.00	10.00	1.00	1.00	100.00	-1.00	21.00	15.00
1	1.20	1.00	3.00	10.00	1.00	1.00	100.00	-1.00	21.00	15.00
1	7.40	.70	3.00	10.00	1.00	1.00	100.00	-1.00	1.00	15.00
1	3.80	1.00	3.00	3.00	1.00	1.00	100.00	-1.00	21.00	15.00
PT. NELLS	5/12/80		SPS-HWY							
1	2.90	.90	3.00	10.00	1.00	1.00	100.00	-1.00	3.00	12.00
1	2.70	1.00	3.00	10.00	1.00	1.00	100.00	-1.00	1.00	12.00
1	2.70	.90	3.00	10.00	1.00	1.00	100.00	-1.00	3.00	12.00
0	2.70	1.20	3.00	10.00	1.00	1.00	100.00	-1.00	1.00	12.00
1	2.30	1.10	.00	5.00	1.00	.00	89.00	-1.00	1.00	15.00
1	4.40	1.00	.00	5.00	1.00	.00	89.00	-1.00	21.00	15.00
1	3.80	1.00	.00	5.00	2.00	.00	89.00	-1.00	1.00	15.00
0	3.80	.80	.00	5.00	2.00	.00	89.00	-1.00	21.00	15.00

[illegible]	5/15/80		SPS-80							
1	3.00	1.30	1.30	14.00	1.00	.00	11.00	-1.00	30.00	15.00
1	2.30	.00	1.30	14.00	1.00	.00	11.00	-1.00	30.00	15.00
1	2.00	.00	1.30	14.00	1.00	.00	11.00	-1.00	1.00	15.00
1	2.00	1.10	1.30	14.00	1.00	.00	11.00	-1.00	1.00	15.00
1	3.00	2.20	3.00	7.00	.50	.00	03.00	-1.00	1.00	15.00
1	3.30	.40	3.00	7.00	.50	.00	00.00	-1.00	21.00	15.00
1	3.00	2.40	3.00	7.00	.50	.00	00.00	-1.00	1.00	15.00
1	2.40	1.40	3.00	7.00	.50	.00	00.00	-1.00	21.00	15.00
1	3.30	1.10	3.00	7.00	.50	.00	03.00	-1.00	21.00	15.00
-										
PT. JACKSON		5/15/80	SPS-84							
1	1.00	1.20	.00	14.00	1.00	.00	11.00	-1.00	1.00	14.00
1	2.70	.70	.00	14.00	1.00	.00	11.00	-1.00	1.00	14.00
1	2.70	1.00	.00	14.00	1.00	.00	11.00	-1.00	30.00	14.00
1	2.70	1.10	.00	14.00	1.00	.00	11.00	-1.00	30.00	14.00
1	3.00	1.40	.00	7.00	.50	.00	00.00	-1.00	1.00	14.00
1	2.00	1.20	.00	7.00	.50	.00	00.00	-1.00	21.00	14.00
1	2.40	1.10	.00	7.00	.50	.00	00.00	-1.00	21.00	14.00
PT. BELLO		5/15/80	SPS-84							
1	3.40	2.30	0.00	7.00	1.00	.00	00.00	-1.00	1.00	15.00
1	3.00	2.30	0.00	7.00	1.00	.00	03.00	-1.00	30.00	15.00
1	1.50	1.00	0.00	7.00	1.00	.00	03.00	-1.00	1.00	15.00
1	2.00	2.20	0.00	7.00	1.00	.00	03.00	-1.00	30.00	15.00
1	3.30	1.20	0.00	14.00	1.00	.00	00.00	-1.00	21.00	15.00
1	3.00	1.40	0.00	14.00	1.00	.00	00.00	-1.00	1.00	15.00
1	2.00	1.20	0.00	14.00	1.00	.00	00.00	-1.00	21.00	15.00
1	2.40	1.10	0.00	14.00	1.00	.00	00.00	-1.00	1.00	15.00
1	2.40	.40	0.00	14.00	1.00	.00	11.00	-1.00	21.00	15.00

41457	2/3/81	SPS-66								
1	1.30	1.30	1.50	10.00	1.00	.00	57.00	-1.00	23.00	10.00
1	1.40	1.60	1.50	10.00	1.00	.00	57.00	-1.00	25.00	10.00
1	2.40	1.30	1.50	10.00	1.00	.00	57.00	-1.00	24.00	10.00
1	3.40	1.20	1.50	10.00	1.00	.00	57.00	-1.00	30.00	10.00
1	1.10	.70	1.50	10.00	1.00	.00	65.00	-1.00	31.00	10.00
1	1.50	.80	1.50	10.00	1.00	.00	65.00	-1.00	30.00	10.00
1	3.00	1.30	1.50	10.00	1.00	.00	65.00	-1.00	25.00	10.00
1	2.00	.60	1.50	10.00	1.00	.00	65.00	-1.00	21.00	10.00
1	3.50	1.50	1.50	10.00	1.00	.00	65.00	-1.00	23.00	10.00
1	1.80	.80	1.50	10.00	1.00	.00	57.00	-1.00	31.00	10.00
0	2.90	.30	1.50	10.00	1.00	.00	57.00	-1.00	21.00	10.00
0	2.40	.20	1.50	10.00	1.00	.00	48.00	-1.00	24.00	10.00

41457	2/4/81	SPS-66								
1	2.60	1.20	1.50	.00	.00	.00	72.00	-1.00	5.00	21.00
1	3.20	1.60	1.50	.00	.00	.00	72.00	-1.00	4.00	21.00
1	4.20	.30	1.50	.00	.00	.00	72.00	-1.00	1.00	21.00
1	4.80	.70	1.50	.00	.00	.00	72.00	-1.00	3.00	21.00
1	2.80	.50	1.50	9.00	1.00	.00	66.00	-1.00	31.00	21.00
1	3.50	.70	1.50	9.00	1.00	.00	66.00	-1.00	30.00	21.00
1	5.00	1.20	1.50	9.00	1.00	.00	66.00	-1.00	25.00	21.00
1	4.40	.70	1.50	9.00	1.00	.00	66.00	-1.00	21.00	21.00
1	6.40	1.80	1.50	9.00	1.00	.00	66.00	-1.00	24.00	21.00
0	6.00	1.10	1.50	9.00	1.00	.00	72.00	-1.00	23.00	21.00

41365	2/4/81	BPS-66								
1	8.50	.60	1.50	8.00	.00	.00	72.00	-1.00	31.00	20.00
1	3.30	.60	1.50	8.00	.00	.00	72.00	-1.00	30.00	20.00
1	4.70	.90	1.50	8.00	.00	.00	72.00	-1.00	25.00	20.00
1	4.40	.30	1.50	8.00	.00	.00	72.00	-1.00	21.00	20.00
1	6.20	1.10	1.50	8.00	.00	.00	72.00	-1.00	24.00	20.00
1	3.80	.80	1.50	8.00	.00	.00	72.00	-1.00	5.00	20.00
1	4.40	1.00	1.50	8.00	.00	.00	72.00	-1.00	4.00	20.00
1	5.40	.50	1.50	8.00	.00	.00	72.00	-1.00	1.00	20.00
1	5.90	.40	1.50	8.00	.00	.00	72.00	-1.00	3.00	20.00
0	5.70	.40	1.50	8.00	.00	.00	72.00	-1.00	23.00	20.00
1	2.80	.40	3.00	8.00	.00	.00	71.00	-1.00	31.00	20.00
1	4.80	1.30	3.00	8.00	.00	.00	71.00	-1.00	25.00	20.00
1	6.40	.90	3.00	8.00	.00	.00	71.00	-1.00	24.00	20.00
1	3.80	.70	3.00	8.00	.00	.00	71.00	-1.00	5.00	20.00
1	4.30	.70	3.00	8.00	.00	.00	71.00	-1.00	4.00	20.00
1	6.00	.90	3.00	8.00	.00	.00	71.00	-1.00	23.00	20.00
0	3.50	.20	3.00	8.00	.00	.00	71.00	-1.00	30.00	20.00
0	4.60	.20	3.00	8.00	.00	.00	71.00	-1.00	21.00	20.00
0	5.30	.10	3.00	8.00	.00	.00	71.00	-1.00	1.00	20.00
0	5.80	.10	3.00	8.00	.00	.00	71.00	-1.00	3.00	20.00
1	2.90	1.30	3.00	9.00	1.00	.00	72.00	-1.00	31.00	21.00
1	4.70	.50	3.00	9.00	1.00	.00	72.00	-1.00	21.00	21.00
1	5.00	.70	3.00	9.00	1.00	.00	72.00	-1.00	25.00	21.00
1	6.50	1.10	3.00	9.00	1.00	.00	72.00	-1.00	24.00	21.00
1	3.80	1.00	3.00	8.00	.00	.00	72.00	-1.00	5.00	21.00
1	5.30	.50	3.00	8.00	.00	.00	72.00	-1.00	1.00	21.00
1	5.90	.50	3.00	8.00	.00	.00	72.00	-1.00	3.00	21.00
1	6.00	.60	3.00	9.00	1.00	.00	72.00	-1.00	23.00	21.00
1	4.30	1.00	3.00	8.00	.00	.00	72.00	-1.00	4.00	21.00
0	3.60	.30	3.00	9.00	1.00	.00	72.00	-1.00	30.00	21.00
1	2.80	.50	1.50	.00	.00	.00	72.00	-1.00	31.00	20.00
1	3.60	.50	1.50	.00	.00	.00	72.00	-1.00	30.00	20.00
1	4.60	.40	1.50	.00	.00	.00	72.00	-1.00	21.00	20.00
1	5.00	.90	1.50	.00	.00	.00	72.00	-1.00	25.00	20.00
1	6.50	.90	1.50	.00	.00	.00	72.00	-1.00	24.00	20.00
1	3.80	1.00	1.50	.00	.00	.00	66.00	-1.00	5.00	20.00
1	4.40	1.30	1.50	.00	.00	.00	66.00	-1.00	4.00	20.00
1	5.80	.50	1.50	9.00	1.00	.00	66.00	-1.00	3.00	20.00

PT.	VEHDE	2/4/81		SPS-64							
	1	2.70	1.10	3.00	.00	.00	.00	72.00	-1.00	31.00	15.00
	1	3.40	1.30	3.00	.00	.00	.00	72.00	-1.00	30.00	15.00
	1	4.90	2.40	3.00	.00	.00	.00	72.00	-1.00	25.00	15.00
	1	6.40	2.30	3.00	.00	.00	.00	72.00	-1.00	24.00	15.00
	1	3.80	2.60	3.00	9.00	1.00	.00	66.00	-1.00	5.00	15.00
	1	4.40	2.60	3.00	9.00	1.00	.00	66.00	-1.00	4.00	15.00
	1	5.40	2.50	3.00	9.00	1.00	.00	66.00	-1.00	1.00	15.00
	1	6.00	2.10	3.00	.00	.00	.00	72.00	-1.00	23.00	15.00
	0	5.90	.30	3.00	9.00	1.00	.00	66.00	-1.00	3.00	15.00
	0	4.60	.40	3.00	.00	.00	.00	72.00	-1.00	21.00	15.00
	1	4.30	3.80	6.00	9.00	1.00	.00	72.00	-1.00	21.00	15.00
	1	6.20	2.10	6.00	8.00	.00	.00	72.00	-1.00	24.00	15.00
	1	3.30	1.10	6.00	9.00	1.00	.00	72.00	-1.00	30.00	15.00
	1	4.60	2.10	6.00	9.00	1.00	.00	72.00	-1.00	25.00	15.00
	1	3.80	2.30	6.00	8.00	.00	.00	72.00	-1.00	5.00	15.00
	1	4.40	2.20	6.00	8.00	.00	.00	72.00	-1.00	4.00	15.00
	1	5.90	.70	6.00	8.00	.00	.00	72.00	-1.00	3.00	15.00
	1	5.30	.40	6.00	8.00	.00	.00	72.00	-1.00	1.00	15.00
	1	5.40	1.90	6.00	8.00	.00	.00	72.00	-1.00	23.00	15.00
	0	2.40	.20	6.00	8.00	.00	.00	72.00	-1.00	31.00	15.00
	1	6.30	2.30	6.00	8.00	.00	.00	72.00	-1.00	24.00	15.00
	1	3.80	1.40	6.00	8.00	.00	.00	71.00	-1.00	5.00	15.00
	1	4.30	2.50	6.00	8.00	.00	.00	71.00	-1.00	4.00	15.00
	0	2.50	.00	6.00	8.00	.00	.00	72.00	-1.00	31.00	15.00
	0	3.20	.30	6.00	8.00	.00	.00	72.00	-1.00	30.00	15.00
	0	4.30	.20	6.00	8.00	.00	.00	72.00	-1.00	21.00	15.00
	0	4.70	.40	6.00	8.00	.00	.00	72.00	-1.00	25.00	15.00
	0	5.30	.10	6.00	8.00	.00	.00	71.00	-1.00	1.00	15.00
	0	5.80	.60	6.00	8.00	.00	.00	71.00	-1.00	3.00	15.00
	0	5.70	.30	6.00	8.00	.00	.00	72.00	-1.00	23.00	15.00

41350	9/15/81	SP8-66								
1	7.40	2.40	3.00	3.00	.50	.00	77.00	1.00	1.00	15.00
1	9.10	1.20	3.00	3.00	.50	.00	77.00	1.00	6.00	15.00
0	9.10	.80	3.00	3.00	.50	.00	77.00	1.00	3.00	15.00
0	7.10	.70	3.00	3.00	.50	.00	77.00	1.00	2.00	15.00
1	4.10	1.20	3.00	3.00	.50	.00	77.00	.00	21.00	15.00
0	4.20	.30	3.00	3.00	.50	.00	82.00	.00	27.00	15.00
1	5.60	1.20	3.00	3.00	.50	.00	86.00	.00	26.00	15.00
0	6.40	.10	3.00	3.00	.50	.00	82.00	.00	22.00	15.00
1	6.80	1.90	6.00	10.00	2.00	1.00	78.00	1.00	2.00	15.00
0	8.80	.90	6.00	10.00	2.00	1.00	78.00	1.00	3.00	15.00
0	8.90	.40	6.00	10.00	2.00	1.00	78.00	1.00	6.00	15.00
0	7.30	.10	6.00	10.00	2.00	1.00	78.00	1.00	1.00	15.00
0	8.40	.40	6.00	6.00	1.50	1.00	79.00	.00	26.00	15.00
0	9.10	.60	6.00	6.00	1.50	1.00	79.00	.00	22.00	15.00
0	8.60	.10	6.00	6.00	1.50	1.00	79.00	.00	21.00	15.00
0	8.80	.20	6.00	6.00	1.50	1.00	79.00	.00	27.00	15.00
1	8.90	2.10	3.00	8.00	1.00	1.00	81.00	1.00	3.00	15.00
0	8.90	.40	3.00	8.00	1.00	1.00	80.00	1.00	6.00	15.00
0	6.80	1.20	3.00	8.00	1.00	1.00	80.00	1.00	2.00	15.00
0	7.30	.20	3.00	8.00	1.00	1.00	80.00	1.00	1.00	15.00
41441	9/15/81	SP8-66								
1	9.10	.60	3.00	3.00	.50	.00	77.00	1.00	6.00	15.00
0	9.00	.40	3.00	3.00	.50	.00	77.00	1.00	3.00	15.00
0	6.90	.70	3.00	3.00	.50	.00	77.00	1.00	2.00	15.00
0	7.40	.30	3.00	3.00	.50	.00	77.00	1.00	1.00	15.00
1	1.00	.40	3.00	3.00	.50	.00	82.00	.00	27.00	15.00
0	.80	.10	3.00	3.00	.50	.00	86.00	.00	21.00	15.00
0	6.50	1.20	3.00	3.00	.50	.00	82.00	.00	26.00	15.00
1	7.10	.40	3.00	3.00	.50	.00	82.00	.00	22.00	15.00
1	9.10	.70	6.00	10.00	2.00	1.00	78.00	1.00	6.00	15.00
0	9.00	.80	6.00	10.00	2.00	1.00	78.00	1.00	3.00	15.00
0	7.00	1.10	6.00	10.00	2.00	1.00	78.00	1.00	2.00	15.00
0	7.50	.10	6.00	10.00	2.00	1.00	78.00	1.00	1.00	15.00
1	3.10	.50	6.00	6.00	1.50	1.00	79.00	.00	27.00	15.00
0	2.90	.10	6.00	6.00	1.50	1.00	79.00	.00	21.00	15.00
0	8.60	.80	6.00	6.00	1.50	1.00	79.00	.00	26.00	15.00
0	9.30	.30	6.00	6.00	1.50	1.00	79.00	.00	22.00	15.00
0	9.10	.40	3.00	8.00	1.00	1.00	80.00	1.00	3.00	15.00
0	7.10	.70	3.00	8.00	1.00	1.00	80.00	1.00	2.00	15.00
0	7.60	.20	3.00	8.00	1.00	1.00	80.00	1.00	1.00	15.00

PT. KNOLL		9/15/81	SPS-64V							
1	8.60	2.70	3.00	.00	.50	.00	11.00	1.00	6.00	15.00
0	8.50	1.00	3.00	3.00	.50	.00	11.00	1.00	3.00	15.00
0	6.40	.50	3.00	3.00	.50	.00	11.00	1.00	2.00	15.00
0	7.00	.60	3.00	3.00	.50	.00	11.00	1.00	1.00	15.00
0	.40	.10	3.00	3.00	.50	.00	11.00	.00	21.00	15.00
0	.60	.30	3.00	3.00	.50	.00	11.00	.00	27.00	15.00
1	7.80	3.10	3.00	3.00	1.00	.00	04.00	1.00	6.00	15.00
0	7.60	.40	6.00	10.00	2.00	1.00	10.00	1.00	3.00	15.00
0	5.60	.60	3.00	3.00	1.00	1.00	02.00	1.00	2.00	15.00
0	6.20	.30	3.00	3.00	1.00	1.00	04.00	1.00	1.00	15.00
0	3.30	.20	6.00	10.00	2.00	1.00	10.00	.00	21.00	15.00
1	3.60	2.00	6.00	10.00	2.00	1.00	10.00	.00	27.00	15.00
0	9.10	1.20	6.00	6.00	1.50	1.00	15.00	.00	26.00	15.00
0	9.80	.10	6.00	6.00	1.50	1.00	15.00	.00	22.00	15.00
1	6.70	2.80	3.00	6.00	1.50	1.00	15.00	1.00	2.00	15.00
1	8.70	1.80	3.00	6.00	1.00	1.00	15.00	1.00	6.00	15.00
0	8.70	.30	3.00	6.00	1.00	1.00	15.00	1.00	3.00	15.00
0	7.20	.40	3.00	6.00	1.00	1.00	15.00	1.00	1.00	15.00

PT. TURNER		9/15/81	SPS-64V							
1	7.30	2.30	3.00	.00	.50	.00	11.00	1.00	6.00	15.00
1	5.70	.60	3.00	.00	.50	.00	11.00	1.00	1.00	15.00
1	7.20	.40	3.00	.00	.50	.00	11.00	1.00	3.00	15.00
0	5.20	.50	3.00	.00	.50	.00	11.00	1.00	2.00	15.00
1	1.00	.90	3.00	3.00	.50	.00	11.00	.00	27.00	15.00
0	.80	.00	3.00	3.00	.50	.00	11.00	.00	21.00	15.00
1	7.30	.90	3.00	3.00	.50	.00	11.00	.00	22.00	15.00
0	6.50	.40	3.00	3.00	.50	.00	11.00	.00	26.00	15.00
0	8.90	.30	6.00	3.00	.50	.00	04.00	1.00	3.00	15.00
0	9.00	.30	6.00	3.00	.50	.00	04.00	1.00	6.00	15.00
0	6.90	.60	6.00	3.00	.50	.00	04.00	1.00	2.00	15.00
0	7.50	.30	6.00	3.00	.50	.00	04.00	1.00	1.00	15.00
1	3.40	3.30	6.00	10.00	2.00	1.00	10.00	.00	27.00	15.00
0	1.10	.20	6.00	10.00	2.00	1.00	10.00	.00	21.00	15.00
0	9.50	.10	6.00	10.00	2.00	1.00	10.00	.00	22.00	15.00
0	8.90	1.20	6.00	10.00	2.00	1.00	10.00	.00	26.00	15.00
1	6.70	.90	3.00	6.00	1.50	1.00	15.00	1.00	2.00	15.00
0	7.20	.20	3.00	6.00	1.50	1.00	15.00	1.00	1.00	15.00
1	8.70	1.20	3.00	6.00	1.50	1.00	15.00	1.00	3.00	15.00
1	8.80	1.30	3.00	6.00	1.50	1.00	15.00	1.00	6.00	15.00

41342	9/16/81		SP8-66							
0	3.70	.60	3.00	16.00	3.00	1.00	90.00	2.00	3.00	15.00
0	4.90	.20	3.00	10.00	3.00	1.00	90.00	2.00	22.00	7.00
0	4.30	.70	3.00	10.00	3.00	1.00	90.00	2.00	21.00	7.00
0	6.60	.60	3.00	10.00	3.00	1.00	90.00	2.00	26.00	7.00
0	6.90	.50	3.00	10.00	3.00	1.00	90.00	2.00	27.00	7.00
41385	9/16/81		SP8-66							
0	3.80	.60	3.00	16.00	3.00	1.00	90.00	2.00	3.00	15.00
1	5.90	.70	3.00	10.00	3.00	1.00	90.00	2.00	26.00	6.00
0	3.70	.30	3.00	10.00	3.00	1.00	90.00	2.00	21.00	8.00
0	4.20	.40	3.00	10.00	3.00	1.00	90.00	2.00	22.00	8.00
0	6.30	.50	3.00	10.00	3.00	1.00	90.00	2.00	27.00	6.00
PT. KNOLL	9/16/81		SP8-64							
1	4.10	2.60	3.00	10.00	3.00	1.00	90.00	2.00	3.00	15.00
0	3.00	.10	3.00	16.00	3.00	1.00	90.00	2.00	22.00	13.00
0	2.90	.90	3.00	16.00	3.00	1.00	90.00	2.00	21.00	13.00
0	4.60	.50	3.00	16.00	3.00	1.00	90.00	2.00	26.00	13.00
1	5.20	1.60	3.00	16.00	3.00	1.00	90.00	2.00	27.00	13.00
PT. TUHNER	9/16/81		SP8-64V							
0	3.70	.50	3.00	10.00	3.00	1.00	90.00	2.00	3.00	15.00
1	3.80	1.50	3.00	16.00	3.00	1.00	90.00	2.00	21.00	15.00
1	5.50	1.50	3.00	16.00	3.00	1.00	90.00	2.00	26.00	15.00
0	3.90	.10	3.00	16.00	3.00	1.00	90.00	2.00	22.00	15.00
0	6.00	.60	3.00	16.00	3.00	1.00	90.00	2.00	27.00	15.00

41342	9/23/41		SPS-66							
0	4.00	.30	3.00	4.00	1.50	.00	43.00	1.00	1.00	15.00
1	3.70	1.20	3.00	7.00	1.50	.00	62.00	1.00	6.00	15.00
0	5.80	.00	3.00	4.00	1.50	.00	43.00	1.00	1.00	15.00
0	5.90	.70	3.00	4.00	1.50	.00	43.00	1.00	3.00	15.00
0	4.30	.30	3.00	6.00	2.00	.00	39.00	.00	30.00	15.00
0	4.20	.80	3.00	6.00	2.00	.00	39.00	.00	31.00	15.00
1	5.70	2.40	3.00	4.00	2.00	.00	43.00	.00	27.00	15.00
0	4.00	.30	6.00	12.00	1.50	.00	47.00	1.00	1.00	15.00
0	3.60	.10	6.00	12.00	1.50	.00	47.00	1.00	6.00	15.00
0	5.70	.00	6.00	12.00	1.50	.00	47.00	1.00	1.00	15.00
0	5.80	.70	6.00	12.00	1.50	.00	47.00	1.00	3.00	15.00
0	4.60	.50	6.00	4.00	2.00	.00	49.00	.00	30.00	15.00
0	4.40	.10	6.00	4.00	2.00	.00	49.00	.00	31.00	15.00
0	6.00	.20	6.00	4.00	2.00	.00	49.00	.00	27.00	15.00
0	3.90	.50	3.00	4.00	1.50	.00	44.00	1.00	1.00	15.00
0	3.50	.20	3.00	4.00	1.50	.00	49.00	1.00	6.00	15.00
0	5.70	.20	3.00	4.00	1.50	.00	49.00	1.00	1.00	15.00
0	5.80	.50	3.00	4.00	1.50	.00	49.00	1.00	3.00	15.00
0	3.50	.20	3.00	8.00	2.00	.00	53.00	.00	30.00	15.00
0	3.40	.70	3.00	8.00	2.00	.00	53.00	.00	31.00	15.00
0	5.00	.60	3.00	8.00	2.00	.00	53.00	.00	27.00	15.00

41385	9/23/81		SPS-66							
0	4.30	.60	3.00	7.00	1.50	.00	62.00	1.00	1.00	15.00
1	4.00	1.10	3.00	7.00	1.50	.00	62.00	1.00	6.00	15.00
0	6.00	.20	3.00	7.00	1.50	.00	62.00	1.00	1.00	15.00
0	6.20	.30	3.00	7.00	1.50	.00	62.00	1.00	3.00	15.00
1	5.50	3.20	3.00	4.00	2.00	.00	43.00	.00	30.00	15.00
0	5.30	.20	3.00	4.00	2.00	.00	43.00	.00	31.00	15.00
1	6.80	.30	3.00	4.00	2.00	.00	43.00	.00	27.00	15.00
0	4.30	.70	6.00	6.00	1.50	.00	39.00	1.00	1.00	15.00
0	4.00	.40	6.00	6.00	1.50	.00	39.00	1.00	6.00	15.00
0	6.00	.60	6.00	6.00	1.50	.00	39.00	1.00	1.00	15.00
0	6.20	.10	6.00	6.00	1.50	.00	39.00	1.00	3.00	15.00
0	5.40	.30	6.00	12.00	2.00	.00	47.00	.00	30.00	15.00
0	5.30	.20	6.00	12.00	2.00	.00	47.00	.00	31.00	15.00
1	6.90	.70	6.00	12.00	2.00	.00	47.00	.00	27.00	15.00
0	4.00	.70	3.00	4.00	1.50	.00	49.00	1.00	1.00	15.00
1	3.60	.60	3.00	4.00	1.50	.00	49.00	1.00	6.00	15.00
0	5.60	.40	3.00	4.00	1.50	.00	49.00	1.00	1.00	15.00
0	5.80	.30	3.00	4.00	1.50	.00	49.00	1.00	3.00	15.00
0	4.60	.20	3.00	8.00	2.00	.00	53.00	.00	30.00	15.00
0	4.50	.30	3.00	8.00	2.00	.00	53.00	.00	31.00	15.00
1	6.00	1.40	3.00	8.00	2.00	.00	53.00	.00	27.00	15.00
PT. TURNER		9/23/81		SPS-64V						
0	4.10	.20	3.00	7.00	1.50	.00	62.00	1.00	1.00	15.00
1	3.80	1.50	3.00	7.00	1.50	.00	62.00	1.00	6.00	15.00
0	5.80	.30	3.00	7.00	1.50	.00	62.00	1.00	1.00	15.00
0	6.00	1.00	3.00	7.00	1.50	.00	62.00	1.00	3.00	15.00
0	5.30	.50	3.00	4.00	2.00	.00	43.00	.00	30.00	15.00
0	5.20	.00	3.00	4.00	2.00	.00	43.00	.00	31.00	15.00
0	4.20	.20	6.00	4.00	1.50	.00	43.00	1.00	1.00	15.00
1	3.80	2.60	6.00	4.00	1.50	.00	43.00	1.00	6.00	15.00
1	5.90	1.00	6.00	4.00	1.50	.00	43.00	1.00	1.00	15.00
0	4.10	.70	6.00	6.00	1.50	.00	34.00	1.00	3.00	15.00
0	5.10	.30	6.00	6.00	2.00	.00	39.00	.00	30.00	15.00
0	5.00	.20	6.00	6.00	2.00	.00	39.00	.00	31.00	15.00
1	6.50	3.20	6.00	6.00	2.00	.00	39.00	.00	27.00	15.00

PT.	WELLS	9/23/81		SPS-64V							
	0	4.10	.00	3.00	7.00	1.50	.00	62.00	1.00	1.00	15.00
	1	3.70	2.10	3.00	7.00	1.50	.00	62.00	1.00	6.00	15.00
	0	5.80	.50	3.00	7.00	1.50	.00	62.00	1.00	1.00	15.00
	0	6.00	1.10	3.00	7.00	1.50	.00	62.00	1.00	3.00	15.00
	1	6.50	3.10	3.00	4.00	2.00	.00	43.00	.00	30.00	15.00
	0	6.40	.10	3.00	4.00	2.00	.00	43.00	.00	31.00	15.00
	1	8.00	2.10	3.00	4.00	2.00	.00	43.00	.00	27.00	15.00
	0	3.90	.10	6.00	6.00	1.50	.00	39.00	1.00	1.00	15.00
	1	5.60	2.50	6.00	6.00	1.50	.00	39.00	1.00	6.00	15.00
	1	5.70	.60	6.00	6.00	1.50	.00	39.00	1.00	1.00	15.00
	1	8.90	1.00	6.00	6.00	1.50	.00	39.00	1.00	3.00	15.00
	0	5.80	.60	6.00	12.00	2.00	.00	47.00	.00	30.00	15.00
	1	8.70	3.70	6.00	12.00	2.00	.00	47.00	.00	31.00	15.00
	1	7.20	3.30	6.00	12.00	2.00	.00	47.00	.00	27.00	15.00
	0	4.00	.00	3.00	4.00	1.50	.00	49.00	1.00	1.00	15.00
	0	3.60	.20	3.00	4.00	1.50	.00	49.00	1.00	6.00	15.00
	1	5.70	.70	3.00	4.00	1.50	.00	49.00	1.00	1.00	15.00
	0	8.90	1.10	3.00	4.00	1.50	.00	49.00	1.00	3.00	15.00
	0	5.80	.60	3.00	8.00	2.00	.00	53.00	.00	30.00	15.00
	0	5.60	.10	3.00	8.00	2.00	.00	53.00	.00	31.00	15.00
	1	7.20	1.40	3.00	8.00	2.00	.00	53.00	.00	27.00	15.00
41350		9/29/81		SPS-66							
	1	5.30	1.30	3.00	11.00	2.50	.00	63.00	.00	7.00	15.00
	0	5.60	.60	3.00	11.00	2.50	.00	63.00	.00	8.00	15.00
	0	6.30	.30	3.00	11.00	2.50	.00	63.00	.00	3.00	15.00
	1	3.70	1.20	3.00	7.00	2.50	.00	60.00	1.00	31.00	15.00
	0	3.80	.50	3.00	7.00	2.50	.00	60.00	1.00	30.00	15.00
	0	5.20	.00	3.00	7.00	2.50	.00	60.00	1.00	27.00	15.00
	0	5.10	.10	6.00	10.00	2.50	.00	57.00	.00	7.00	15.00
	0	5.90	1.10	6.00	10.00	2.50	.00	57.00	.00	8.00	15.00
	0	6.20	.10	6.00	10.00	2.50	.00	57.00	.00	3.00	15.00
	0	5.70	1.20	6.00	10.00	2.50	.00	54.00	1.00	31.00	15.00
	0	5.60	.30	6.00	10.00	2.50	.00	54.00	1.00	30.00	15.00
	0	7.10	.50	6.00	10.00	2.50	.00	54.00	1.00	27.00	15.00

41385	9/29/81		SPS-66							
0	5.00	.50	3.00	7.00	2.50	.00	60.00	1.00	7.00	15.00
0	5.40	.50	3.00	7.00	2.50	.00	60.00	1.00	8.00	15.00
0	6.00	.40	3.00	7.00	2.50	.00	60.00	1.00	3.00	15.00
0	4.80	.40	3.00	10.00	2.50	.00	59.00	.00	31.00	15.00
0	4.70	.10	3.00	10.00	2.50	.00	59.00	.00	30.00	15.00
0	6.20	.10	3.00	10.00	2.50	.00	59.00	.00	27.00	15.00
0	5.00	.50	6.00	11.00	3.00	.00	54.00	.00	31.00	11.00
0	5.00	.40	6.00	11.00	3.00	.00	54.00	.00	30.00	11.00
0	6.40	.00	6.00	11.00	3.00	.00	54.00	.00	27.00	11.00

PT. BONITA		9/29/81		SPS-64V						
0	5.10	.00	3.00	11.00	2.50	.00	63.00	1.00	7.00	15.00
0	5.50	.90	3.00	11.00	2.50	.00	63.00	1.00	8.00	15.00
0	6.00	.00	3.00	11.00	2.50	.00	63.00	1.00	3.00	15.00
0	5.20	.10	3.00	8.00	2.50	.00	60.00	.00	31.00	13.00
0	5.30	.80	3.00	8.00	2.50	.00	60.00	.00	30.00	13.00
0	6.70	.30	3.00	9.00	2.50	.00	59.00	.00	27.00	13.00
0	5.20	.10	6.00	9.00	2.50	.00	59.00	1.00	7.00	15.00
0	5.90	1.10	6.00	9.00	2.50	.00	59.00	1.00	8.00	15.00
1	6.20	.80	6.00	9.00	2.50	.00	59.00	1.00	3.00	15.00
0	5.40	.20	6.00	10.00	2.50	.00	57.00	.00	31.00	15.00
0	5.50	.70	6.00	10.00	2.50	.00	57.00	.00	30.00	15.00
0	7.00	.30	6.00	10.00	2.50	.00	57.00	.00	27.00	15.00
0	5.00	.10	3.00	10.00	2.50	.00	54.00	1.00	7.00	15.00
0	6.10	1.40	3.00	10.00	2.50	.00	54.00	1.00	8.00	15.00
0	6.00	.00	3.00	10.00	2.50	.00	54.00	1.00	3.00	15.00
0	5.60	.20	3.00	11.00	3.50	.00	53.00	.00	31.00	15.00
0	5.60	.80	3.00	11.00	3.50	.00	53.00	.00	30.00	15.00
0	7.10	.30	3.00	11.00	3.50	.00	53.00	.00	27.00	15.00

41342	9/30/81		SPS-66							
0	4.70	.10	3.00	12.00	3.50	.00	59.00	1.00	3.00	15.00
0	4.70	.50	3.00	12.00	3.50	.00	59.00	1.00	8.00	15.00
0	6.80	.10	3.00	12.00	3.50	.00	59.00	1.00	27.00	15.00
0	4.70	.20	6.00	10.00	4.00	.00	54.00	1.00	3.00	15.00
1	4.70	.90	6.00	10.00	4.00	.00	54.00	1.00	8.00	15.00
0	6.80	.10	6.00	10.00	4.00	.00	54.00	1.00	27.00	15.00
0	4.40	.40	3.00	16.00	4.00	.00	50.00	1.00	3.00	15.00
0	4.40	.20	3.00	16.00	4.00	.00	50.00	1.00	8.00	15.00
0	6.50	.40	3.00	16.00	4.00	.00	50.00	1.00	27.00	15.00
41441	9/30/81		SPS-66							
0	4.60	.40	3.00	10.00	4.00	.00	54.00	1.00	3.00	13.50
1	4.60	.60	3.00	10.00	4.00	.00	54.00	1.00	8.00	13.50
0	6.70	.30	3.00	10.00	4.00	.00	54.00	1.00	27.00	13.50
0	4.60	.30	6.00	16.00	4.00	.00	50.00	1.00	3.00	13.50
0	4.60	.30	6.00	16.00	4.00	.00	50.00	1.00	8.00	13.50
0	6.60	.30	6.00	16.00	4.00	.00	50.00	1.00	27.00	13.50
PT. BONITA		9/30/81	SPS-64							
0	4.60	.00	3.00	10.00	2.50	.00	52.00	1.00	3.00	15.00
0	4.70	.60	3.00	10.00	2.50	.00	52.00	1.00	8.00	15.00
0	6.70	.20	3.00	10.00	2.50	.00	52.00	1.00	27.00	15.00
0	4.60	.10	6.00	12.00	3.50	.00	59.00	1.00	3.00	15.00
1	4.60	1.20	6.00	12.00	3.50	.00	59.00	1.00	8.00	15.00
1	6.60	1.30	6.00	12.00	3.50	.00	59.00	1.00	27.00	15.00
0	4.60	.20	3.00	10.00	4.00	.00	54.00	1.00	3.00	15.00
1	4.60	1.10	3.00	10.00	4.00	.00	54.00	1.00	8.00	15.00
0	6.60	.00	3.00	10.00	4.00	.00	54.00	1.00	27.00	15.00
0	4.70	.10	6.00	16.00	4.00	.00	50.00	1.00	3.00	15.00
0	4.70	.30	6.00	16.00	4.00	.00	50.00	1.00	8.00	15.00
0	6.70	.00	6.00	16.00	4.00	.00	50.00	1.00	27.00	15.00
PT. KNOLL		9/30/81	SPS-64V							
0	4.70	.10	3.00	10.00	2.50	.00	52.00	1.00	3.00	15.00
1	4.70	2.40	3.00	10.00	2.50	.00	52.00	1.00	8.00	15.00
1	6.40	3.10	3.00	10.00	2.50	.00	52.00	1.00	27.00	15.00
1	4.70	2.70	6.00	12.00	3.50	.00	59.00	1.00	3.00	15.00
0	4.70	.10	6.00	10.00	3.50	.00	54.00	1.00	8.00	15.00
1	6.70	3.20	6.00	12.00	3.50	.00	59.00	1.00	27.00	15.00
1	4.40	1.80	3.00	16.00	4.00	.00	54.00	1.00	3.00	15.00
0	4.40	.10	3.00	16.00	4.00	.00	54.00	1.00	8.00	15.00
0	6.40	.30	3.00	16.00	4.00	.00	54.00	1.00	27.00	15.00
0	4.90	.50	6.00	16.00	4.00	.00	50.00	1.00	3.00	15.00
1	4.90	3.30	6.00	16.00	4.00	.00	50.00	1.00	8.00	15.00
0	7.00	.30	6.00	16.00	4.00	.00	50.00	1.00	27.00	15.00

41344	10/6/81	SPS-06									
1	3.00	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	2.60	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	2.40	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	2.20	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	2.00	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	1.80	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	1.60	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	1.40	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	1.20	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	1.00	24.00	13.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	.80	10.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	.60	23.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	.40	20.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00
1	.20	10.00	.00	3.00	4.00	.50	.00	74.00	2.00	1.00	15.00

41441	10/6/81	SPS-06									
0	3.00	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	2.80	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	2.60	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	2.40	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	2.20	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	2.00	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	1.80	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	1.60	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	1.40	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	1.20	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	1.00	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	.80	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	.60	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	.40	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	.20	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
0	3.00	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00

C	2.80	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	2.60	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	2.40	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	2.20	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	2.00	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	1.80	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	1.60	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	1.40	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	1.20	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	1.00	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	.80	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	.60	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	.40	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	.20	24.00	.00	3.00	4.00	.00	.00	76.00	2.00	1.00	15.00
C	3.00	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	2.80	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	2.60	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	2.40	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	2.20	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	2.00	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	1.80	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	1.60	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	1.40	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	1.20	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	1.00	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	.80	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	.60	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	.40	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	.20	24.00	.00	3.00	4.00	.50	.00	74.00	2.00	8.00	15.00
C	3.00	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	2.80	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	2.60	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	2.40	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	2.20	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	2.00	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	1.80	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	1.60	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	1.40	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00
C	1.20	24.00	.00	3.00	5.00	.50	.00	72.00	2.00	21.00	15.00

0	1.00	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
0	.80	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
0	.60	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
0	.40	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
0	.20	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	3.00	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	2.80	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	2.60	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	2.40	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	2.20	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	2.00	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	1.80	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	1.60	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	1.40	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	1.20	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	1.00	24.00	10.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	.80	23.00	23.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	.60	23.00	23.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	.40	23.00	23.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	.20	23.00	7.00	5.00	5.00	.50	.00	72.00	2.00	21.00	15.00
1	3.00	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	2.80	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	2.60	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	2.40	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	2.20	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	2.00	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	1.80	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	1.60	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	1.40	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	1.20	24.00	.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	1.00	25.00	25.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	.80	25.00	25.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	.60	25.00	25.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	.40	20.00	20.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
1	.20	20.00	20.00	5.00	5.00	.50	.00	72.00	2.00	29.00	15.00
0	3.00	24.00	.00	0.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
0	2.80	24.00	.00	0.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
0	2.60	24.00	.00	0.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
0	2.40	24.00	.00	0.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00

C	4.20	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	2.00	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	1.80	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	1.60	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	1.40	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	1.20	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	1.00	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	.80	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	.60	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	.40	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	.20	24.00	.00	6.00	7.00	1.00	1.00	74.00	2.00	7.00	15.00
C	3.00	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	2.80	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	2.60	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	2.40	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	2.20	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	2.00	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	1.80	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	1.60	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	1.40	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	1.20	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	1.00	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	.80	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	.60	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	.40	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	.20	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	1.00	15.00
C	3.00	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	2.80	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	2.60	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	2.40	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	2.20	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	2.00	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	1.80	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	1.60	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	1.40	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	1.20	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	1.00	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	.80	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	.60	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	.40	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00
C	.20	24.00	.00	6.00	7.00	1.00	1.00	95.00	2.00	8.00	15.00

CAPE FAIRWEATHER 10/6/81 SRS-00

1	3.00	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	2.80	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	2.60	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	2.40	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	2.20	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	2.00	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	1.80	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	1.60	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	1.40	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	1.20	24.00	21.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	1.00	23.00	23.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	.80	22.00	22.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	.60	25.00	24.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	.40	23.00	24.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	.20	27.00	0.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	3.00	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	7.00	14.00
1	2.80	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	2.60	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	2.40	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	2.20	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	2.00	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	1.80	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	1.60	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	1.40	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	1.20	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	1.00	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	.80	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	.60	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	.40	20.00	20.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	.20	29.00	0.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	3.00	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	1.00	14.00
1	2.80	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	8.00	14.00
1	2.60	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	8.00	14.00
1	2.40	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	8.00	14.00
1	2.20	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	8.00	14.00
1	2.00	24.00	.00	3.00	4.00	.00	.00	16.00	2.00	8.00	14.00
1	1.80	24.00	12.00	3.00	4.00	.00	.00	16.00	2.00	8.00	14.00

1.00	45.00	45.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
1.40	30.00	30.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
1.20	30.00	30.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
1.00	45.00	45.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
.80	45.00	45.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
.60	45.00	45.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
.40	45.00	15.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
.20	45.00	.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
5.00	44.00	.00	5.00	4.00	.00	.00	16.00	4.00	8.00	14.00
2.80	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
2.60	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
2.40	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
2.20	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
2.00	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
1.80	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
1.60	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
1.40	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
1.20	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
1.00	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
.80	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
.60	44.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
.40	44.00	30.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
.20	45.00	.00	5.00	4.00	.50	.00	14.00	4.00	21.00	14.00
5.00	44.00	.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
4.80	44.00	.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
4.60	44.00	.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
4.40	44.00	.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
4.20	44.00	.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
4.00	44.00	.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
3.80	44.00	.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
3.60	44.00	15.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
3.40	43.00	45.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
3.20	44.00	45.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
3.00	30.00	29.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
.80	45.00	45.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
.60	45.00	44.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
.40	45.00	6.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
.20	47.00	.00	5.00	5.00	.50	.00	12.00	4.00	21.00	14.00
5.00	44.00	.00	5.00	5.00	.50	.00	12.00	4.00	24.00	14.00

1	2.80	24.00	.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	2.60	24.00	.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	2.40	24.00	.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	2.20	24.00	.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	2.00	24.00	.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	1.80	24.00	.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	1.60	24.00	7.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	1.40	47.00	41.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	1.20	30.00	25.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	1.00	24.00	21.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	.80	24.00	20.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	.60	30.00	24.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	.40	30.00	.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	.20	30.00	.00	3.00	5.00	.50	.00	12.00	2.00	49.00	14.00
1	3.00	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	2.80	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	2.60	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	2.40	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	2.20	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	2.00	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	1.80	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	1.60	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	1.40	18.00	15.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	1.20	30.00	24.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	1.00	25.00	24.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	.80	24.00	20.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	.60	25.00	25.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	.40	30.00	6.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
1	.20	30.00	.00	6.00	5.00	.50	.00	12.00	2.00	7.00	14.00
0	3.00	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	2.80	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	2.60	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	2.40	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	2.20	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	2.00	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	1.80	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	1.60	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	1.40	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
0	1.20	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00

1	1.00	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	.80	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	.60	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	.40	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	.20	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	3.00	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	2.80	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	2.60	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	2.40	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	2.20	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	2.00	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	1.80	24.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	1.60	24.00	10.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	1.40	31.00	31.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	1.20	30.00	30.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	1.00	25.00	25.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	.80	28.00	28.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	.60	25.00	0.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	.40	31.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	.20	30.00	.00	6.00	5.00	.50	.00	12.00	2.00	1.00	14.00
1	3.00	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	2.80	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	2.60	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	2.40	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	2.20	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	2.00	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	1.80	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	1.60	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	1.40	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	1.20	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	1.00	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	.80	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	.60	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	.40	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	.20	24.00	.00	6.00	7.00	1.00	.00	14.00	2.00	21.00	14.00
1	3.00	24.00	.00	6.00	7.00	1.00	1.00	45.00	2.00	27.00	14.00
1	2.80	24.00	.00	6.00	7.00	1.00	1.00	45.00	2.00	27.00	14.00
1	2.60	24.00	.00	6.00	7.00	1.00	1.00	45.00	2.00	27.00	14.00
1	2.40	24.00	.00	6.00	7.00	1.00	1.00	45.00	2.00	27.00	14.00

1	2.20	24.00	.00	0.00	7.00	1.00	1.00	95.00	2.00	27.00	14.00
1	2.00	24.00	.00	0.00	7.00	1.00	1.00	95.00	2.00	27.00	14.00
1	1.80	24.00	3.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	1.80	30.00	11.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	1.40	25.00	9.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	1.20	20.00	13.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	1.00	31.00	30.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	.80	25.00	25.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	.80	25.00	11.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	.40	25.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	.20	25.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	27.00	14.00
1	3.00	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	2.80	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	2.60	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	2.40	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	2.20	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	2.00	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	1.80	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	1.60	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	1.40	24.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	1.20	24.00	10.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	1.00	31.00	18.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	.80	30.00	25.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	.60	25.00	11.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	.40	20.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00
1	.20	25.00	.00	0.00	9.00	1.00	1.00	95.00	2.00	24.00	14.00

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0	3.00	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	2.80	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	2.60	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	2.40	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	2.20	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	2.00	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	1.80	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	1.60	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	1.40	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00
0	1.20	24.00	.00	3.00	4.00	.50	.00	00.00	2.00	1.00	15.00

0	1.00	24.00	.00	3.00	4.00	.50	.00	87.00	2.00	1.00	15.00
0	.80	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	1.00	15.00
0	.60	24.00	.00	3.00	4.00	.50	.00	87.00	2.00	1.00	15.00
0	.40	24.00	.00	3.00	4.00	.50	.00	87.00	2.00	1.00	15.00
0	.20	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	1.00	15.00
1	3.00	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	2.80	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	2.60	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	2.40	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	2.20	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	2.00	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	1.80	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	1.60	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	1.40	24.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	1.20	24.00	10.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	1.00	31.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	.80	48.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	.60	30.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	.40	30.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	.20	48.00	.00	3.00	4.00	.50	.00	88.00	2.00	8.00	15.00
1	3.00	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	2.80	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	2.60	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	2.20	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	1.80	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	1.60	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	1.40	24.00	4.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	1.20	24.00	4.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	1.00	28.00	5.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	.80	48.00	6.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	.60	30.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	.40	30.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
1	.20	30.00	.00	3.00	3.00	.50	.00	82.00	2.00	7.00	15.00
0	3.00	24.00	.00	6.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	2.80	24.00	.00	6.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	2.60	24.00	.00	6.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	2.40	24.00	.00	6.00	3.00	.50	.00	58.00	2.00	31.00	15.00

0	2.20	24.00	.00	6.00	3.00	.50	.00	36.00	2.00	31.00	15.00
0	2.00	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	1.80	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	1.60	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	1.40	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	1.20	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	1.00	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	.80	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	.60	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	.40	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	.20	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	31.00	15.00
0	3.00	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	2.80	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	2.60	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	2.40	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	2.20	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	2.00	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	1.80	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	1.60	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	1.40	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	1.20	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	1.00	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	.80	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	.60	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	.40	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
0	.20	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	30.00	15.00
1	3.00	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	2.80	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	2.60	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	2.40	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	2.20	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	2.00	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	1.80	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	1.60	24.00	22.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	1.40	28.00	13.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	1.20	24.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	1.00	30.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	.80	30.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	.60	26.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00
1	.40	27.00	.00	6.00	3.00	.50	.00	56.00	2.00	26.00	15.00

1	.20	48.00	.00	6.00	3.00	.30	.00	58.00	2.00	48.00	15.00
1	3.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.60	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.40	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.20	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.60	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.40	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.20	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	.60	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	.40	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	.20	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	3.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.60	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.40	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.20	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.60	22.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.40	20.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.20	23.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.00	23.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	.80	20.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	.60	30.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	.40	28.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	.20	25.00	.00	3.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	3.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.60	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.40	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.20	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	1.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	1.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	7.00	15.00

C	1.40	24.00	.00	5.00	5.00	.00	.00	00.00	2.00	7.00	15.00
C	1.20	24.00	.00	5.00	5.00	.00	.00	00.00	2.00	7.00	15.00
C	1.00	24.00	.00	5.00	5.00	.00	.00	00.00	2.00	7.00	15.00
C	.80	24.00	.00	5.00	5.00	.00	.00	00.00	2.00	7.00	15.00
C	.60	24.00	.00	5.00	5.00	.00	.00	00.00	2.00	7.00	15.00
C	.40	24.00	.00	5.00	5.00	.00	.00	00.00	2.00	7.00	15.00
C	.20	24.00	.00	5.00	5.00	.00	.00	00.00	2.00	7.00	15.00
C	3.00	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	7.00	15.00
C	2.80	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	2.60	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	2.40	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	2.20	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	2.00	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	1.80	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	1.60	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	1.40	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	1.20	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	1.00	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	.80	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	.60	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	.40	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	.20	24.00	.00	6.00	4.00	.00	.00	00.00	2.00	31.00	15.00
C	3.00	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	2.80	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	2.60	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	2.40	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	2.20	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	2.00	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	1.80	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	1.60	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	1.40	24.00	3.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	1.20	21.00	15.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	1.00	30.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	.80	30.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	.60	30.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	.40	30.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	.20	30.00	.00	6.00	6.00	.30	.00	01.00	2.00	30.00	15.00
C	3.00	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	26.00	15.00
C	2.80	24.00	.00	6.00	6.00	.30	.00	01.00	2.00	26.00	15.00

1	2.60	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	2.40	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	2.20	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	2.00	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	1.80	25.00	10.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	1.60	33.00	15.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	1.40	30.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	1.20	30.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	1.00	28.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	.80	28.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	.60	30.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	.40	30.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00
1	.20	28.00	.00	6.00	6.00	.50	.00	81.00	2.00	26.00	15.00

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1	3.00	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	2.60	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	2.20	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	1.80	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	1.60	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	1.40	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	1.20	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	1.00	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	.80	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	.60	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	.40	10.00	10.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	.20	49.00	20.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	3.00	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	8.00	15.00
1	2.60	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	8.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	8.00	15.00
1	2.20	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	8.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	8.00	15.00
1	1.80	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	8.00	15.00
1	1.60	24.00	.00	3.00	3.00	.50	.00	82.00	2.00	8.00	15.00

1	1.40	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	8.00	15.00
1	1.20	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	8.00	15.00
1	1.00	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	8.00	15.00
1	.80	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	8.00	15.00
1	.60	24.00	10.00	3.00	3.00	.50	.00	02.00	2.00	8.00	15.00
1	.40	20.00	19.00	3.00	3.00	.50	.00	02.00	2.00	8.00	15.00
1	.20	25.00	25.00	3.00	3.00	.50	.00	02.00	2.00	8.00	15.00
1	3.00	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	2.80	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	2.60	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	2.20	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	1.80	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	1.60	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	1.40	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	1.20	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	1.00	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	.80	24.00	.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	.60	24.00	22.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	.40	23.00	18.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
1	.20	20.00	4.00	3.00	3.00	.50	.00	02.00	2.00	7.00	15.00
0	3.00	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	2.80	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	2.60	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	2.40	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	2.20	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	2.00	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	1.80	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	1.60	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	1.40	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	1.20	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	1.00	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	.80	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	.60	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	.40	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	.20	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
0	3.00	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00

1	2.00	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	1.80	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	1.60	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	1.40	24.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	1.20	24.00	4.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	1.00	23.00	8.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	.80	21.00	12.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	.60	25.00	12.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	.40	25.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	.20	20.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	3.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	2.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	2.60	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	2.40	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	2.20	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	2.00	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	1.80	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	1.60	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	1.40	24.00	.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	1.20	24.00	16.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	1.00	23.00	7.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	.80	20.00	21.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	.60	25.00	24.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	.40	25.00	25.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
1	.20	25.00	25.00	3.00	3.00	.00	.00	60.00	2.00	60.00	15.00
6	3.00	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	2.80	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	2.60	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	2.40	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	2.20	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	2.00	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	1.80	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	1.60	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	1.40	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00
6	1.20	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	1.00	15.00

C	1.00	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	1.00	15.00
C	.80	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	1.00	15.00
C	.60	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	1.00	15.00
C	.40	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	1.00	15.00
C	.20	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	1.00	15.00
1	3.00	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	2.80	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	2.60	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	2.40	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	2.20	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	2.00	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	1.80	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	1.60	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	1.40	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	1.20	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	1.00	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	.80	24.00	0.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	.60	45.00	25.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	.40	20.00	19.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	.20	20.00	.00	0.00	4.00	.00	.00	60.00	2.00	8.00	15.00
1	3.00	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	2.80	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	2.60	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	2.40	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	2.20	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	2.00	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	1.80	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	1.60	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	1.40	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	1.20	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	1.00	24.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	.80	24.00	10.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	.60	43.00	23.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	.40	25.00	5.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
1	.20	15.00	.00	0.00	4.00	.00	.00	60.00	2.00	7.00	15.00
C	3.00	24.00	.00	0.00	0.00	.50	.00	61.00	2.00	31.00	15.00
C	2.80	24.00	.00	0.00	0.00	.50	.00	61.00	2.00	31.00	15.00
C	2.60	24.00	.00	0.00	0.00	.50	.00	61.00	2.00	31.00	15.00
C	2.40	24.00	.00	0.00	0.00	.50	.00	61.00	2.00	31.00	15.00

1	2.20	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	2.00	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	1.80	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	1.60	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	1.40	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	1.20	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	1.00	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	.80	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	.60	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	.40	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	.20	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	31.00	15.00
1	3.00	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	2.80	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	2.60	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	2.40	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	2.20	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	2.00	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	1.80	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	1.60	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	1.40	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	1.20	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	1.00	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	.80	24.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	.60	24.00	10.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	.40	23.00	7.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	.20	30.00	.00	6.00	6.00	.50	.00	81.00	2.00	30.00	15.00
1	3.00	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	2.80	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	2.60	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	2.40	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	2.20	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	2.00	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	1.80	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	1.60	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	1.40	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	1.20	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	1.00	24.00	.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	.80	19.00	14.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	.60	25.00	25.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	.40	23.00	23.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00
1	.20	20.00	12.00	6.00	7.00	.50	.00	81.00	2.00	26.00	15.00

CAPE FAIRWEATHER 10/13/81 SPS-66

1	3.00	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.60	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.40	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.20	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.00	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.80	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.60	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.40	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.20	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.00	24.00	7.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	.80	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	.60	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	.40	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	.20	26.00	17.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	3.00	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.60	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.40	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.20	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.00	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.80	24.00	8.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.60	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.40	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.20	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	1.00	26.00	26.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	.80	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	.60	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	.40	23.00	23.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	.20	26.00	4.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	3.00	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.60	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.40	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00
1	2.20	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	1.00	15.00

1	2.00	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	1.80	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	1.60	24.00	.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	1.40	24.00	17.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	1.20	25.00	21.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	1.00	24.00	23.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	.80	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	.60	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	.40	25.00	25.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	.20	25.00	8.00	3.00	4.00	.50	.00	60.00	2.00	7.00	15.00
1	3.00	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	2.80	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	2.60	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	2.20	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	1.80	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	1.60	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	1.40	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	1.20	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	1.00	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	.80	24.00	19.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	.60	25.00	25.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	.40	25.00	25.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	.20	25.00	16.00	3.00	3.00	.50	.00	62.00	2.00	31.00	15.00
1	3.00	24.00	[illegible]	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	2.80	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	2.60	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	2.20	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	1.80	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	1.60	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	1.40	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	1.20	24.00	.00	3.00	3.00	.50	.00	62.00	2.00	30.00	15.00
1	1.00	24.00	4.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	.80	25.00	25.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	.60	25.00	23.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1	.40	25.00	23.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00

1	.20	48.00	4.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	3.00	24.00	.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	2.80	24.00	.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	2.60	24.00	.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	2.40	24.00	.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	2.20	24.00	.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	2.00	24.00	.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	1.80	24.00	9.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	1.60	23.00	23.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	1.40	25.00	25.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	1.20	26.00	26.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	1.00	23.00	23.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	.80	25.00	25.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	.60	23.00	23.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	.40	26.00	26.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	.20	23.00	4.00	3.00	3.00	.50	.00	50.00	2.00	50.00	15.00
1	3.00	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.80	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.60	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.40	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.20	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	2.00	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.80	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.60	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.40	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.20	24.00	4.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	1.00	23.00	13.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	.80	23.00	22.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	.60	23.00	23.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	.40	20.00	10.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	.20	23.00	.00	6.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1	3.00	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.80	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.60	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.40	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.20	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	2.00	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.80	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.60	12.00	11.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00

1	1.40	26.00	25.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.20	17.00	16.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	1.00	29.00	28.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	.80	23.00	21.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	.60	23.00	21.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	.40	19.00	1.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	.20	25.00	.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1	3.00	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.80	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.60	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.40	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.20	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	2.00	24.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	1.80	24.00	10.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	1.60	24.00	22.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	1.40	23.00	22.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	1.20	26.00	25.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	1.00	20.00	20.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	.80	23.00	11.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	.60	23.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	.40	23.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	.20	25.00	.00	6.00	3.00	.00	.00	60.00	2.00	7.00	15.00
1	3.00	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	2.80	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	2.60	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	2.40	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	2.20	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	2.00	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	1.80	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	1.60	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	1.40	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	1.20	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	1.00	20.00	19.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	.80	21.00	19.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	.60	30.00	28.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	.40	23.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	.20	23.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
1	3.00	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	2.80	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	2.60	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00

1	2.40	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	2.20	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	2.00	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	1.80	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	1.60	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	1.40	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	1.20	24.00	3.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	1.00	25.00	18.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	.80	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	.60	25.00	24.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	.40	25.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	.20	25.00	.00	6.00	4.00	.00	.00	60.00	2.00	30.00	15.00
1	3.00	24.00	.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	2.80	10.00	10.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	2.60	24.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	2.40	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	2.20	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	2.00	30.00	30.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	1.80	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	1.60	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	1.40	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	1.20	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	1.00	25.00	24.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	.80	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	.60	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	.40	25.00	7.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00
1	.20	30.00	.00	6.00	4.00	.00	.00	60.00	2.00	25.00	15.00

PT. TURNER 10/13/81 SPS-84

1	3.00	26.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1	2.80	26.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1	2.60	26.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1	2.40	26.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1	2.20	26.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1	2.00	26.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1	1.80	26.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1	1.60	26.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1	1.40	21.00	21.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00

1.40	40.00	40.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1.00	25.00	25.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
.80	20.00	20.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
.60	15.00	15.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
.40	15.00	17.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
.20	15.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
3.00	40.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
2.80	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
2.60	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
2.40	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
2.20	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
2.00	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1.80	25.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1.60	15.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1.40	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1.20	25.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
1.00	25.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
.80	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
.60	25.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
.40	25.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
.20	25.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
3.00	25.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
2.80	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00
2.60	20.00	.00	3.00	3.00	.50	.00	60.00	2.00	1.00	15.00

2.40	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
2.40	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
2.00	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
1.80	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
1.60	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
1.40	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
1.40	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
1.00	26.00	17.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
.80	25.00	25.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
.60	25.00	25.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
.40	25.00	25.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
.20	24.00	24.00	3.00	3.00	.50	.00	58.00	2.00	31.00	15.00
3.00	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
2.80	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
2.60	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
2.40	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
2.20	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
2.00	26.00	5.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1.80	23.00	23.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1.60	23.00	23.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1.40	27.00	27.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1.20	23.00	21.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
1.00	25.00	24.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
.80	24.00	24.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
.60	22.00	21.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
.40	25.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
.20	25.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
3.00	28.00	.00	3.00	3.00	.50	.00	58.00	2.00	30.00	15.00
2.80	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
2.60	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
2.40	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
2.20	26.00	.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
2.00	21.00	21.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
1.80	25.00	25.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
1.60	26.00	26.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
1.40	25.00	25.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
1.20	24.00	24.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
1.00	26.00	26.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00
.80	25.00	25.00	3.00	3.00	.50	.00	58.00	2.00	26.00	15.00

.60	25.00	25.00	3.00	3.00	.50	.00	30.00	2.00	20.00	15.00
.40	23.00	23.00	3.00	3.00	.50	.00	30.00	2.00	20.00	15.00
.20	28.00	25.00	3.00	3.00	.50	.00	30.00	2.00	20.00	15.00
4.00	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
3.80	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
3.60	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
3.40	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
3.20	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
3.00	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
2.80	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
2.60	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
2.40	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
2.20	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
2.00	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1.80	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1.60	26.00	11.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1.40	10.00	10.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1.20	23.00	23.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
1.00	23.00	23.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
.80	23.00	23.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
.60	20.00	20.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
.40	21.00	21.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
.20	20.00	11.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
3.80	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
3.60	26.00	.00	8.00	3.00	.00	.00	60.00	2.00	1.00	15.00
3.40	23.00	23.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
3.20	20.00	20.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
3.00	24.00	24.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
2.80	21.00	21.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
2.60	20.00	20.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
2.40	25.00	25.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
2.20	18.00	18.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
2.00	23.00	23.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1.80	20.00	20.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1.60	25.00	25.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1.40	21.00	21.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1.20	18.00	18.00	8.00	3.00	.00	.00	60.00	2.00	8.00	15.00
1.00	22.00	22.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
.80	23.00	23.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00
.60	22.00	22.00	6.00	3.00	.00	.00	60.00	2.00	8.00	15.00

	.40	40.00	40.00	6.00	5.00	.00	.00	60.00	2.00	8.00	15.00
	.20	41.00	10.00	6.00	5.00	.00	.00	60.00	2.00	8.00	15.00
	4.00	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	3.80	20.00	.00	6.00	4.00	.00	.00	61.00	2.00	7.00	15.00
	3.60	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	3.40	20.00	10.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	3.20	23.00	25.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	3.00	21.00	20.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	2.80	22.00	21.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	2.60	23.00	23.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	2.40	20.00	20.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	2.20	21.00	21.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	2.00	20.00	14.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	1.80	23.00	23.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	1.60	23.00	23.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	1.40	20.00	20.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	1.20	23.00	23.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	1.00	20.00	20.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	.80	23.00	21.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	.60	20.00	7.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	.40	23.00	.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	.20	23.00	.00	6.00	4.00	.00	.00	60.00	2.00	7.00	15.00
	4.00	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	3.80	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	3.60	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	3.40	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	3.20	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	3.00	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	2.80	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	2.60	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	2.40	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	2.20	20.00	.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	2.00	20.00	10.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	1.80	23.00	23.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	1.60	25.00	24.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	1.40	23.00	21.00	6.00	4.00	.00	.00	61.00	2.00	31.00	15.00
	1.20	25.00	25.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	1.00	20.00	20.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00
	.80	20.00	20.00	6.00	4.00	.00	.00	60.00	2.00	31.00	15.00

	.00	28.00	28.00	6.00	4.00	.50	.00	16.00	2.00	31.00	15.00
	.40	23.00	23.00	6.00	4.00	.50	.00	00.00	2.00	31.00	15.00
	.60	27.00	8.00	8.00	4.00	.50	.00	00.00	2.00	31.00	15.00
	4.00	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	3.80	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	3.60	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	3.40	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	3.20	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	3.00	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	2.80	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	2.60	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	2.40	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	2.20	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	2.00	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	1.80	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	1.60	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	1.40	26.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	1.20	18.00	18.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	1.00	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	.80	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	.60	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	.40	25.00	14.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	.20	31.00	.00	8.00	0.00	.50	.00	01.00	2.00	30.00	15.00
	3.00	28.00	28.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	3.00	28.00	28.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	3.40	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	3.20	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	3.00	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	2.80	28.00	28.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	2.60	23.00	23.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	2.40	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	2.20	28.00	28.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	2.00	23.00	23.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	1.80	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	1.60	30.00	30.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	1.40	28.00	28.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	1.20	23.00	23.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	1.00	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	.80	28.00	28.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	.60	23.00	23.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	.40	25.00	25.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00
	.20	31.00	31.00	8.00	0.00	.50	.00	01.00	2.00	28.00	15.00

41331	10/14/81		BP3-00								
1	3.00	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.80	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.60	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.40	28.00	25.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.20	33.00	30.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.00	40.00	38.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.80	30.00	29.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.60	30.00	19.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.40	41.00	38.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.20	35.00	33.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.00	35.00	31.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.80	35.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.60	31.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.40	36.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.20	60.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	3.00	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	2.80	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	2.60	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	2.40	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	2.20	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	2.00	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	1.80	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	1.60	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	1.40	24.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	1.20	33.00	32.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	1.00	38.00	34.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	.80	32.00	31.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	.60	41.00	24.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	.40	40.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	.20	40.00	.00	3.00	.00	.50	.00	96.00	.00	7.00	15.00
1	3.00	24.00	.00	3.00	.00	.50	.00	96.00	.00	8.00	15.00
1	2.80	24.00	.00	3.00	.00	.50	.00	96.00	.00	8.00	15.00
1	2.60	24.00	.00	3.00	.00	.50	.00	96.00	.00	8.00	15.00
1	2.40	24.00	.00	3.00	.00	.50	.00	96.00	.00	8.00	15.00
1	2.20	24.00	.00	3.00	.00	.50	.00	96.00	.00	8.00	15.00

1	2.00	24.00	.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	1.80	24.00	.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	1.60	24.00	.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	1.40	24.00	.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	1.20	24.00	.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	1.00	24.00	.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	.80	30.00	30.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	.60	25.00	25.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	.40	30.00	25.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
1	.20	30.00	.00	5.00	.00	.30	.00	60.00	.00	0.00	15.00
0	3.00	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.80	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.60	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.40	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.20	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.00	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.80	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.60	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.40	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.20	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.00	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	.80	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	.60	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	.40	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	.20	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	3.00	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.8	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.60	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.40	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.20	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	2.00	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.80	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.60	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.40	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.20	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	1.00	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	.80	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	.60	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	.40	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00
0	.20	24.00	.00	0.00	.00	.00	.00	54.00	1.00	21.00	15.00

1	3.00	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	2.80	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	2.60	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	2.40	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	2.20	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	2.00	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	1.80	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	1.60	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	1.40	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	1.20	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	1.00	24.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	.80	26.00	26.00	0.00	3.00	.00	.00	33.00	1.00	28.00	17.00
1	.60	26.00	26.00	0.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	.40	26.00	24.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	.20	26.00	.00	5.00	3.00	.00	.00	33.00	1.00	28.00	15.00
1	3.00	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	2.80	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	2.60	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	2.40	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	2.20	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	2.00	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	1.80	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	1.60	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	1.40	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	1.20	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	1.00	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	.80	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	.60	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	.40	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	.20	24.00	.00	5.00	3.00	.00	.00	33.00	.00	3.00	15.00
1	3.00	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00
1	2.80	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00
1	2.60	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00
1	2.40	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00
1	2.20	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00
1	2.00	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00
1	1.80	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00
1	1.60	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00
1	1.40	24.00	.00	5.00	4.00	.00	.00	33.00	.00	7.00	15.00

0	1.20	24.00	.00	5.00	4.00	.00	.00	55.00	.00	7.00	15.00
0	1.00	24.00	.00	5.00	4.00	.00	.00	55.00	.00	7.00	15.00
0	.80	24.00	.00	5.00	4.00	.00	.00	55.00	.00	7.00	15.00
0	.60	24.00	.00	5.00	4.00	.00	.00	55.00	.00	7.00	15.00
0	.40	24.00	.00	5.00	4.00	.00	.00	55.00	.00	7.00	15.00
0	.20	24.00	.00	5.00	4.00	.00	.00	55.00	.00	7.00	15.00
1	3.00	24.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	2.80	24.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	2.60	24.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	2.40	24.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	2.20	24.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	2.00	24.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	1.80	24.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	1.60	24.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	1.40	23.00	23.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	1.20	23.00	23.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	1.00	23.00	20.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	.80	23.00	0.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	.60	23.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	.40	23.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
1	.20	23.00	.00	5.00	4.00	.00	.00	55.00	.00	8.00	15.00
0	3.00	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	2.80	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	2.60	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	2.40	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	2.20	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	2.00	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	1.80	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	1.60	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	1.40	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	1.20	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	1.00	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	.80	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	.60	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	.40	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	.20	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	3.00	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00
0	2.80	24.00	.00	0.00	4.00	.00	.00	50.00	1.00	21.00	15.00

0	2.40	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	2.20	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	2.00	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	1.80	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	1.60	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	1.40	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	1.20	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	1.00	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	.80	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	.60	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	.40	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00
0	.20	24.00	.00	0.00	4.00	.00	.00	56.00	1.00	21.00	15.00

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1	3.00	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	2.80	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	2.60	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	2.40	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	2.20	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	2.00	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	1.80	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	1.60	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	1.40	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	1.20	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	1.00	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	.80	24.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	.60	24.00	11.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	.40	25.00	2.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
1	.20	26.00	.00	3.00	.00	.50	.00	66.00	.00	3.00	15.00
0	3.00	24.00	.00	3.00	.00	.00	.00	54.00	.00	7.00	15.00
0	2.80	24.00	.00	3.00	.00	.00	.00	54.00	.00	7.00	15.00
0	2.60	24.00	.00	3.00	.00	.00	.00	54.00	.00	7.00	15.00
0	2.40	24.00	.00	3.00	.00	.00	.00	54.00	.00	7.00	15.00
0	2.20	24.00	.00	3.00	.00	.00	.00	54.00	.00	7.00	15.00
0	2.00	24.00	.00	3.00	.00	.00	.00	54.00	.00	7.00	15.00
0	1.80	24.00	.00	3.00	.00	.00	.00	54.00	.00	7.00	15.00
0	1.60	24.00	.00	3.00	.00	.00	.00	54.00	.00	7.00	15.00

C	1.40	24.00	.00	3.00	.00	.00	.00	34.00	.00	7.00	15.00
C	1.20	24.00	.00	3.00	.00	.00	.00	34.00	.00	7.00	15.00
C	1.00	24.00	.00	3.00	.00	.00	.00	34.00	.00	7.00	15.00
C	.80	24.00	.00	3.00	.00	.00	.00	34.00	.00	7.00	15.00
C	.60	24.00	.00	3.00	.00	.00	.00	34.00	.00	7.00	15.00
C	.40	24.00	.00	3.00	.00	.00	.00	34.00	.00	7.00	15.00
C	.20	24.00	.00	3.00	.00	.00	.00	34.00	.00	7.00	15.00
C	3.00	24.00	.00	3.00	.00	.00	.00	34.00	.00	7.00	15.00
C	2.80	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	2.60	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	2.40	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	2.20	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	2.00	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	1.80	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	1.60	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	1.40	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	1.20	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	1.00	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	.80	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	.60	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	.40	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	.20	24.00	.00	3.00	.00	.00	.00	34.00	.00	8.00	15.00
C	3.00	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.80	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.60	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.40	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.20	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.00	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.80	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.60	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.40	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.20	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.00	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	.80	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	.60	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	.40	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	.20	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	3.00	24.00	.00	0.00	3.00	.00	.00	33.00	1.00	21.00	15.00

C	4.80	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.80	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.40	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.20	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.00	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.80	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.60	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.40	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.20	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	1.00	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	.80	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	.60	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	.40	26.00	20.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	.20	25.00	5.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	3.00	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	21.00	15.00
C	2.80	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	2.60	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	2.40	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	2.20	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	2.00	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	1.80	24.00	.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	1.60	24.00	12.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	1.40	25.00	25.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	1.20	25.00	24.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	1.00	30.00	30.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	.80	23.00	22.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	.60	28.00	28.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	.40	23.00	15.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	.20	23.00	.00	6.00	3.00	.00	.00	33.00	1.00	26.00	15.00
C	3.00	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	2.80	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	2.60	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	2.40	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	2.20	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	2.00	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	1.80	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	1.60	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	1.40	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00
C	1.20	24.00	.00	6.00	4.00	.00	.00	30.00	.00	3.00	15.00

0	1.00	24.00	.00	6.00	4.00	.00	.00	56.00	.00	1.00	15.00
0	.80	24.00	.00	6.00	4.00	.00	.00	56.00	.00	1.00	15.00
0	.60	24.00	.00	6.00	4.00	.00	.00	56.00	.00	1.00	15.00
0	.40	24.00	.00	6.00	4.00	.00	.00	56.00	.00	1.00	15.00
0	.20	24.00	.00	6.00	4.00	.00	.00	56.00	.00	1.00	15.00
1	1.00	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	1.80	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	2.60	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	2.40	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	2.20	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	2.00	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	1.80	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	1.60	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	1.40	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	1.20	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	1.00	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	.80	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	.60	24.00	.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	.40	22.00	2.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	.20	23.00	1.00	6.00	4.00	.00	.00	56.00	.00	7.00	15.00
1	1.00	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	2.00	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	2.00	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	2.40	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	2.20	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	2.00	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	1.80	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	1.60	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	1.40	24.00	.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	1.20	23.00	1.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	1.00	23.00	1.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	.80	23.00	1.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	.60	23.00	1.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	.40	23.00	1.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
1	.20	23.00	1.00	6.00	4.00	.00	.00	56.00	.00	8.00	15.00
0	1.00	24.00	.00	1.00	.00	1.00	.00	72.00	1.00	31.00	15.00
0	2.00	24.00	.00	1.00	.00	1.00	.00	72.00	1.00	31.00	15.00
0	2.00	24.00	.00	1.00	.00	1.00	.00	72.00	1.00	31.00	15.00
0	2.40	24.00	.00	1.00	.00	1.00	.00	72.00	1.00	31.00	15.00
0	2.20	24.00	.00	1.00	.00	1.00	.00	72.00	1.00	31.00	15.00

C	2.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	1.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	1.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	1.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	1.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	1.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	3.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
C	2.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	2.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	2.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	2.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	2.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	1.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	1.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	1.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	1.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	1.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	21.00	15.00
C	3.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	2.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	2.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	2.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	2.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	2.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	1.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	1.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	1.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	1.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	1.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
C	3.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	2.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	2.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	2.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	2.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	2.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	1.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	1.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	1.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	1.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	1.00	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	.80	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	.60	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	.40	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00
C	.20	24.00	.00	3.00	.00	1.00	.00	12.00	1.00	61.00	15.00

CAPE FAIRWEATHER 10/14/81 ORSON

1	3.00	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.80	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.60	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.40	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.20	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.00	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.80	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.60	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.40	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.20	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.00	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.80	24.00	8.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.60	25.00	20.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.40	30.00	23.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.20	30.00	20.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	3.00	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.80	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.60	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.40	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.20	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.00	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.80	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.60	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.40	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.20	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	1.00	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.80	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.60	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.40	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	.20	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	3.00	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.80	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.60	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.40	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00
1	2.20	24.00	.00	3.00	.00	1.00	.00	72.00	.00	3.00	15.00

1	2.00	24.00	1.00	3.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	1.60	25.00	14.00	1.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	1.00	25.00	25.00	1.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	1.40	25.00	22.00	1.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	1.20	26.00	26.00	1.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	1.00	25.00	25.00	1.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	.80	30.00	30.00	1.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	.60	25.00	25.00	1.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	.40	25.00	25.00	1.00	.00	1.00	.00	72.00	.00	8.00	15.00
1	.20	30.00	0.00	1.00	.00	.00	.00	72.00	1.00	31.00	15.00
1	3.00	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	2.60	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	2.00	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	2.40	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	2.40	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	2.00	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	1.00	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	1.00	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	1.40	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	1.20	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	1.00	24.00	.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	.60	24.00	1.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	.60	25.00	21.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	.40	22.00	21.00	1.00	.00	.00	.00	66.00	1.00	31.00	15.00
1	.20	25.00	14.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	3.00	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	2.60	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	2.00	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	2.40	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	2.20	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	2.00	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	1.80	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	1.60	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	1.40	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	1.20	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	1.00	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	.80	24.00	.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	.60	24.00	14.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00
1	.40	25.00	25.00	1.00	.00	.00	.00	54.00	1.00	21.00	15.00

.20	25.00	10.00	5.00	.00	.00	.00	54.00	1.00	21.00	15.00
5.00	24.00	.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
2.80	24.00	.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
2.60	24.00	.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
2.40	24.00	.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
2.20	24.00	.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
2.00	24.00	.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
1.80	24.00	.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
1.60	24.00	13.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
1.40	23.00	13.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
1.20	23.00	22.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
1.00	20.00	20.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
.80	20.00	23.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
.60	21.00	21.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
.40	25.00	25.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
.20	20.00	20.00	5.00	.00	.00	.00	54.00	1.00	26.00	15.00
5.00	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
2.80	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
2.60	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
2.40	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
2.20	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
2.00	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
1.80	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00	
1.60	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
1.40	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
1.20	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
1.00	24.00	17.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
.80	22.00	22.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
.60	23.00	4.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
.40	25.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
.20	25.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
5.00	24.00	.00	6.00	5.00	.00	.00	53.00	.00	5.00	15.00
2.80	24.00	.00	6.00	5.00	.00	.00	53.00	.00	7.00	15.00
2.60	24.00	.00	6.00	5.00	.00	.00	53.00	.00	7.00	15.00
2.40	24.00	.00	6.00	5.00	.00	.00	53.00	.00	7.00	15.00
2.20	24.00	.00	6.00	5.00	.00	.00	53.00	.00	7.00	15.00
2.00	24.00	.00	6.00	5.00	.00	.00	53.00	.00	7.00	15.00
1.80	19.00	14.00	6.00	5.00	.00	.00	53.00	.00	7.00	15.00
1.60	25.00	21.00	6.00	5.00	.00	.00	53.00	.00	7.00	15.00

1	1.40	20.00	20.00	0.00	3.00	.00	.00	53.00	.00	7.00	15.00
1	1.40	20.00	20.00	0.00	3.00	.00	.00	53.00	.00	7.00	15.00
1	1.00	23.00	23.00	0.00	3.00	.00	.00	53.00	.00	7.00	15.00
1	.60	20.00	0.00	0.00	3.00	.00	.00	53.00	.00	7.00	15.00
1	.60	25.00	.00	0.00	3.00	.00	.00	53.00	.00	7.00	15.00
1	.40	25.00	.00	0.00	3.00	.00	.00	53.00	.00	7.00	15.00
1	.40	25.00	.00	0.00	3.00	.00	.00	53.00	.00	7.00	15.00
1	1.00	24.00	.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	2.00	24.00	.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	2.00	24.00	.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	2.40	24.00	0.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	2.40	15.00	10.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	2.00	25.00	22.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	1.80	21.00	21.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	1.60	25.00	25.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	1.40	25.00	25.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	1.20	25.00	25.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	1.00	20.00	20.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	.80	25.00	17.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	.00	10.00	.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	.40	23.00	.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	.20	23.00	.00	0.00	3.00	.00	.00	53.00	.00	8.00	15.00
1	3.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	2.80	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	2.80	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	2.40	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	2.20	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	2.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	1.80	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	1.60	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	1.40	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	1.20	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	1.00	20.00	5.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	.80	23.00	12.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	.60	17.00	21.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	.40	20.00	20.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	.20	23.00	18.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	3.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00
1	2.80	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	31.00	15.00

1	2.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	2.40	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	2.40	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	2.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	1.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	1.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	1.40	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	1.40	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	1.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	.00	24.00	10.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	.00	25.00	20.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	.40	25.00	8.00	0.00	4.00	.00	.00	53.00	1.00	21.00	15.00
1	.40	26.00	.00	0.00	4.00	.00	.00	53.00	1.00	20.00	15.00
1	3.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	2.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	2.00	24.00	.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	2.40	24.00	15.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	2.40	30.00	21.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	2.00	30.00	24.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	1.00	25.00	21.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	1.00	26.00	26.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	1.40	25.00	25.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	1.40	26.00	26.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	1.00	25.00	25.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	.00	26.00	26.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	.00	26.00	17.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	.40	26.00	.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00
1	.00	25.00	.00	0.00	4.00	.00	.00	53.00	1.00	26.00	15.00

PT. TURNER 10/14/81 SPSSH-V

1	3.00	26.00	.00	3.00	.00	1.00	.00	72.00	1.00	31.00	15.00
1	2.00	26.00	.00	3.00	.00	1.00	.00	72.00	1.00	31.00	15.00
1	2.00	26.00	.00	3.00	.00	1.00	.00	72.00	1.00	31.00	15.00
1	2.40	26.00	.00	3.00	.00	1.00	.00	72.00	1.00	31.00	15.00
1	2.20	26.00	.00	3.00	.00	1.00	.00	72.00	1.00	31.00	15.00
1	2.00	26.00	.00	3.00	.00	1.00	.00	72.00	1.00	31.00	15.00
1	1.00	26.00	.00	3.00	.00	1.00	.00	72.00	1.00	31.00	15.00

	1.80	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	1.40	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	1.20	43.00	43.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	1.00	43.00	22.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	.80	43.00	20.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	.80	40.00	40.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	.40	40.00	20.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	.40	44.00	44.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	3.00	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	31.00	15.00
	2.80	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.00	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.40	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.20	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.00	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.80	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.60	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.40	40.00	11.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.20	43.00	40.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.00	44.00	24.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	.80	43.00	23.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	.60	43.00	25.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	.40	40.00	20.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	.20	41.00	10.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	3.20	11.00	11.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	3.00	43.00	45.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.80	40.00	40.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.60	43.00	23.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.40	43.00	23.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.20	43.00	23.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	2.00	40.00	20.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.80	40.00	20.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.60	40.00	20.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.40	43.00	43.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.20	43.00	23.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	1.00	43.00	23.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	.80	43.00	10.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	.60	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	.40	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00
	.20	40.00	.00	3.00	.00	1.00	.00	12.00	1.00	41.00	15.00

0	1.00	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	2.00	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	2.00	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	2.40	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	2.40	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	2.00	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	1.80	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	1.80	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	1.40	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	1.40	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	1.00	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	.80	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	.60	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	.40	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
0	.20	20.00	.00	1.00	.00	.00	.00	60.00	.00	1.00	15.00
1	1.00	20.00	.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	2.60	20.00	12.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	2.60	20.00	23.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	2.40	23.00	25.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	2.20	23.00	26.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	2.00	23.00	25.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	1.80	23.00	25.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	1.60	23.00	25.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	1.40	23.00	25.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	1.20	27.00	27.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	1.00	24.00	24.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	.80	23.00	23.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	.60	23.00	23.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	.40	23.00	25.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	.20	20.00	1.00	1.00	.00	.00	.00	60.00	.00	7.00	15.00
1	3.20	14.00	4.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00
1	3.00	23.00	21.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00
1	2.80	20.00	24.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00
1	2.60	20.00	16.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00
1	2.40	30.00	30.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00
1	2.20	24.00	20.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00
1	2.00	22.00	22.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00
1	1.80	23.00	23.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00
1	1.80	23.00	23.00	1.00	.00	.00	.00	54.00	.00	8.00	15.00

1	1.40	45.00	45.00	5.00	.00	.00	.00	54.00	.00	0.00	15.00
1	1.20	40.00	40.00	5.00	.00	.00	.00	54.00	.00	0.00	15.00
1	1.00	45.00	45.00	5.00	.00	.00	.00	54.00	.00	0.00	15.00
1	.80	45.00	45.00	5.00	.00	.00	.00	54.00	.00	0.00	15.00
1	.60	45.00	12.00	5.00	.00	.00	.00	54.00	.00	0.00	15.00
1	.40	22.00	.00	5.00	.00	.00	.00	54.00	.00	0.00	15.00
1	.20	20.00	.00	5.00	.00	.00	.00	54.00	.00	0.00	15.00
1	4.00	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	3.80	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	3.60	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	3.40	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	3.20	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	3.00	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	2.80	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	2.60	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	2.40	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	2.20	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	2.00	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	1.80	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	1.60	40.00	.00	0.00	5.00	1.00	.00	53.00	1.00	31.00	15.00
1	1.40	40.00	0.00	0.00	5.00	.00	.00	53.00	1.00	31.00	15.00
1	1.20	40.00	40.00	0.00	5.00	.00	.00	53.00	1.00	31.00	15.00
1	1.00	40.00	40.00	0.00	5.00	.00	.00	53.00	1.00	31.00	15.00
1	.80	40.00	40.00	0.00	5.00	.00	.00	53.00	1.00	31.00	15.00
1	.60	25.00	24.00	0.00	5.00	.00	.00	53.00	1.00	31.00	15.00
1	.40	20.00	19.00	0.00	5.00	.00	.00	53.00	1.00	31.00	15.00
1	.20	20.00	20.00	0.00	5.00	.00	.00	53.00	1.00	31.00	15.00
1	4.00	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	3.80	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	3.60	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	3.40	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	3.20	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	3.00	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	2.80	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	2.60	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	2.40	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	2.20	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	2.00	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00
1	1.80	40.00	.00	0.00	5.00	.00	.00	53.00	1.00	41.00	15.00

1	1.80	20.00	.00	0.00	3.00	.00	.00	53.00	1.00	41.00	15.00
1	1.40	20.00	.00	0.00	3.00	.00	.00	53.00	1.00	41.00	15.00
1	1.20	20.00	4.00	0.00	3.00	.00	.00	53.00	1.00	41.00	15.00
1	1.00	20.00	47.00	0.00	3.00	.00	.00	53.00	1.00	41.00	15.00
1	.80	23.00	22.00	0.00	3.00	.00	.00	53.00	1.00	41.00	15.00
1	.00	23.00	23.00	0.00	3.00	.00	.00	53.00	1.00	41.00	15.00
1	.40	23.00	23.00	0.00	3.00	.00	.00	53.00	1.00	41.00	15.00
1	.20	23.00	7.00	0.00	3.00	.00	.00	53.00	1.00	41.00	15.00
1	4.00	20.00	.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	3.80	20.00	.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	3.60	20.00	.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	3.40	20.00	.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	3.20	11.00	10.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	3.00	20.00	24.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	2.80	23.00	14.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	2.60	23.00	22.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	2.40	23.00	18.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	2.20	23.00	23.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	2.00	23.00	22.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	1.80	20.00	20.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	1.60	23.00	23.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	1.40	23.00	23.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	1.20	10.00	10.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	1.00	23.00	23.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	.00	30.00	30.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	.60	21.00	21.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	.40	23.00	20.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
1	.20	23.00	23.00	0.00	3.00	.00	.00	53.00	1.00	40.00	15.00
U	4.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	3.80	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	3.60	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	3.40	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	3.20	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	3.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	2.80	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	2.60	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	2.40	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	2.20	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00
U	2.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	3.00	15.00

0	1.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
0	1.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
0	1.40	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
0	1.20	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
0	1.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
0	.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
0	.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
0	.40	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
0	.20	20.00	.00	0.00	4.00	.00	.00	53.00	.00	1.00	15.00
1	3.00	22.00	20.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	3.00	19.00	18.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	3.40	20.00	20.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	3.20	21.00	21.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	3.00	23.00	23.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	2.80	20.00	20.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	2.60	23.00	23.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	2.40	23.00	23.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	2.20	25.00	25.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	2.00	20.00	20.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	1.80	18.00	18.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	1.60	21.00	21.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	1.40	23.00	23.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	1.20	23.00	23.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	1.00	23.00	23.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	.00	23.00	23.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	.00	23.00	23.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	.40	20.00	12.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
1	.20	23.00	.00	0.00	4.00	.00	.00	53.00	.00	7.00	15.00
0	4.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	3.80	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	3.60	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	3.40	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	3.20	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	3.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	2.80	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	2.60	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	2.40	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	2.20	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00
0	2.00	20.00	.00	0.00	4.00	.00	.00	53.00	.00	8.00	15.00

0	1.80	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00
0	1.60	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00
0	1.40	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00
0	1.20	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00
0	1.00	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00
0	.80	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00
0	.60	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00
0	.40	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00
0	.20	20.00	.00	4.00	4.00	.00	.00	33.00	.00	8.00	15.00

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1	3.00	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	2.80	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	2.60	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	2.40	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	2.20	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	2.00	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	1.80	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	1.60	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	1.40	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	1.20	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	1.00	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	.80	20.00	20.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	.60	30.00	30.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	.40	30.00	3.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
1	.20	30.00	.00	3.00	15.00	3.00	.00	80.00	1.00	8.00	15.00
0	3.00	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	2.80	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	2.60	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	2.40	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	2.20	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	2.00	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	1.80	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	1.60	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	1.40	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	1.20	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00
0	1.00	24.00	.00	3.00	15.00	3.00	.00	80.00	1.00	7.00	15.00

C	.00	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	7.00	15.00
C	.00	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	7.00	15.00
C	.40	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	7.00	15.00
C	.40	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	7.00	15.00
C	3.00	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	2.00	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	2.00	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	2.40	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	2.20	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	2.00	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	1.80	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	1.60	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	1.40	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	1.20	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	1.00	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	.80	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	.60	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	.40	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	.20	24.00	.00	5.00	15.00	5.00	.00	00.00	1.00	5.00	15.00
C	3.00	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	2.00	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	2.00	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	2.40	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	2.20	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	2.00	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	1.80	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	1.60	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	1.40	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	1.20	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	1.00	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	.80	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	.60	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	.40	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00
C	.20	24.00	.00	6.00	15.00	5.00	.00	00.00	.00	5.00	15.00

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	5.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	4.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	3.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.40	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.20	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.40	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.20	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	.80	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	.60	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	.40	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	.20	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	3.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	4.60	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	4.40	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	4.20	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	4.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.80	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.60	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.40	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.20	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	1.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	.80	37.00	12.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	.60	36.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	.40	35.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	3.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.80	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.60	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.40	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.20	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00
	2.00	24.00	.00	3.00	13.00	2.50	.00	58.00	.00	21.00	15.00

	1.00	24.00	.00	5.00	15.00	2.50	.00	30.00	.00	25.00	15.00
	1.00	24.00	.00	5.00	15.00	2.50	.00	30.00	.00	25.00	15.00
	1.40	24.00	.00	5.00	15.00	2.50	.00	30.00	.00	25.00	15.00
	1.20	24.00	.00	5.00	15.00	2.50	.00	30.00	.00	25.00	15.00
	1.00	24.00	0.00	5.00	15.00	2.50	.00	30.00	.00	25.00	15.00
	.00	25.00	14.00	5.00	15.00	2.50	.00	30.00	.00	25.00	15.00
	.00	30.00	17.00	5.00	15.00	2.50	.00	30.00	.00	25.00	15.00
	.40	30.00	.00	5.00	15.00	2.50	.00	30.00	.00	25.00	15.00
	3.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	2.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	2.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	2.40	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	2.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	2.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	1.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	1.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	1.40	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	1.40	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	1.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	.00	24.00	.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	.40	32.00	30.00	5.00	15.00	3.00	.00	30.00	1.00	25.00	15.00
	4.00	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	4.00	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	4.40	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	4.20	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	4.00	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	1.00	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	1.00	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	1.40	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	1.40	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	1.00	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	.00	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	.00	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	.40	24.00	.00	5.00	25.00	3.00	.00	30.00	.00	5.00	15.00
	.20	24.00	.00	5.00	25.00	1.00	.00	30.00	.00	5.00	15.00
	1.00	24.00	.00	5.00	15.00	3.00	.00	30.00	.00	5.00	15.00
	2.00	24.00	.00	5.00	15.00	3.00	.00	30.00	.00	7.00	15.00
	2.00	24.00	.00	5.00	15.00	3.00	.00	30.00	.00	7.00	15.00

	2.40	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	2.20	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	2.00	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	1.80	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	1.60	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	1.40	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	1.20	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	1.00	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	.80	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	.60	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	.40	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	.20	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	3.00	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	4.00	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	7.00	15.00
	2.80	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	2.60	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	2.40	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	2.20	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	2.00	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	1.80	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	1.60	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	1.40	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	1.20	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	1.00	24.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	.00	0.00	0.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	.00	25.00	18.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	.40	30.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00
	.00	40.00	.00	3.00	15.00	3.00	.00	00.00	.00	8.00	15.00

PT. JACKSON 10/20/81 DRY-DAY

	3.00	20.00	.00	3.00	20.00	3.00	.00	43.00	.00	21.00	16.00
	2.80	20.00	.00	3.00	20.00	3.00	.00	43.00	.00	21.00	16.00
	2.60	20.00	.00	3.00	20.00	3.00	.00	43.00	.00	21.00	16.00
	2.40	20.00	.00	3.00	20.00	3.00	.00	43.00	.00	21.00	16.00
	2.20	20.00	.00	3.00	20.00	3.00	.00	43.00	.00	21.00	16.00
	2.00	20.00	.00	3.00	20.00	3.00	.00	43.00	.00	21.00	16.00
	1.80	20.00	.00	3.00	20.00	3.00	.00	43.00	.00	21.00	16.00

1.00	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
1.40	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
1.20	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
1.00	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
.80	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
.60	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
.40	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
.20	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
3.00	26.00	.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
2.80	22.00	22.00	5.00	20.00	5.00	.00	45.00	.00	21.00	10.00
2.80	25.00	25.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
2.40	21.00	17.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
2.20	23.00	18.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
2.00	26.00	22.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.80	25.00	25.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.60	27.00	26.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.40	25.00	12.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.20	25.00	.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.00	25.00	.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
.80	30.00	.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
.60	30.00	.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
.40	24.00	.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
.20	27.00	.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
3.00	27.00	12.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
2.80	28.00	21.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
2.60	20.00	17.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
2.40	30.00	23.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
2.20	24.00	20.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
2.00	22.00	18.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.80	25.00	21.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.60	26.00	20.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.40	25.00	24.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.20	25.00	24.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
1.00	24.00	23.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
.80	25.00	20.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
.60	25.00	21.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
.40	26.00	4.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
.20	25.00	.00	5.00	20.00	5.00	.00	45.00	.00	27.00	10.00
4.00	26.00	.00	5.00	13.00	2.50	.00	50.00	1.00	26.00	10.00

1	3.80	26.00	.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	3.80	26.00	.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	3.40	26.00	.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	3.40	30.00	25.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	3.00	30.00	24.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	2.60	30.00	24.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	2.60	32.00	26.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	2.40	31.00	31.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	2.20	32.00	32.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	2.00	33.00	31.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	1.80	33.00	33.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	1.60	30.00	30.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	1.40	34.00	33.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	1.20	31.00	31.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	1.00	30.00	30.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	.80	34.00	34.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	.60	29.00	24.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	.40	30.00	4.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	.20	26.00	.00	0.00	13.00	2.50	.00	50.00	1.00	26.00	16.00
1	4.00	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	3.80	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	3.00	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	3.40	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	3.20	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	3.00	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	2.80	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	2.60	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	2.40	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	2.20	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	2.00	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	1.80	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	1.60	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	1.40	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	1.20	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	1.00	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	.80	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	.60	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	.40	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00
1	.20	26.00	.00	0.00	15.00	3.00	.00	60.00	1.00	27.00	16.00

2.00	23.00	23.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
1.80	24.00	26.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
1.80	30.00	22.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
1.40	31.00	10.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
1.20	30.00	7.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
1.00	30.00	.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
.80	23.00	.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
.80	30.00	.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
.40	23.00	.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
.20	33.00	.00	3.00	23.00	3.00	.00	00.00	.00	7.00	10.00
3.00	31.00	28.00	3.00	15.00	3.00	.00	00.00	.00	7.00	10.00
2.80	30.00	22.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
2.80	31.00	27.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
2.40	28.00	25.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
2.20	28.00	26.00	3.00	13.00	3.00	.00	00.00	.00	8.00	10.00
2.00	28.00	28.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
1.80	28.00	28.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
1.60	30.00	28.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
1.40	28.00	24.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
1.20	33.00	25.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
1.00	28.00	29.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
.80	30.00	28.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
.80	30.00	24.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
.40	28.00	24.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
.20	28.00	1.00	3.00	15.00	3.00	.00	00.00	.00	8.00	10.00
3.00	28.00	.00	3.00	13.00	3.00	.00	00.00	.00	8.00	10.00
2.80	28.00	.00	3.00	13.00	3.00	.00	00.00	.00	8.00	10.00
2.60	28.00	1.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
2.40	33.00	7.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
2.20	31.00	17.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
2.00	33.00	14.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
1.80	31.00	25.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
1.60	30.00	24.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
1.40	31.00	27.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
1.20	33.00	33.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
1.00	35.00	34.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
.80	33.00	33.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
.80	35.00	35.00	3.00	13.00	3.00	.00	01.00	1.00	8.00	10.00
.40	25.00	4.00	3.00	13.00	1.00	.00	01.00	1.00	8.00	10.00

1	.60	25.00	.00	5.00	15.00	5.00	.00	81.00	1.00	0.00	15.00
0	3.00	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	2.80	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	2.60	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	2.40	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	2.20	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	2.00	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	1.80	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	1.60	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	1.40	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	1.20	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	1.00	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	.80	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	.60	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	.40	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00
0	.20	20.00	.00	5.00	15.00	5.00	.00	81.00	1.00	5.00	15.00

41342	11/10/81		BRS-00								
0	3.00	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	2.80	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	2.60	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	2.40	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	2.20	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	2.00	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	1.80	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	1.60	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	1.40	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	1.20	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	1.00	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	.80	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	.60	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	.40	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	.20	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	0.00	15.00
0	3.00	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	1.00	15.00
0	2.80	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	1.00	15.00
0	2.60	24.00	.00	5.00	20.00	5.30	.00	72.00	1.00	1.00	15.00

0	2.40	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	2.20	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	2.00	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	1.80	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	1.60	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	1.40	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	1.20	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	1.00	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	.80	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	.60	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	.40	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00
0	.20	24.00	.00	3.00	20.00	3.30	.00	12.00	1.00	1.00	15.00

41385 11/10/81 BPB-00

0	3.00	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	2.80	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	2.60	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	2.40	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	2.20	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	2.00	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	1.80	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	1.60	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	1.40	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	1.20	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	1.00	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	.80	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	.60	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	.40	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	.20	24.00	.00	3.00	11.00	3.30	.00	12.00	1.00	27.00	15.00
0	3.00	24.00	.00	3.00	20.00	4.30	.00	12.00	1.00	1.00	15.00
0	2.80	24.00	.00	3.00	20.00	4.30	.00	12.00	1.00	1.00	15.00
0	2.60	24.00	.00	3.00	20.00	4.30	.00	12.00	1.00	1.00	15.00
0	2.40	24.00	.00	3.00	20.00	4.30	.00	12.00	1.00	1.00	15.00
0	2.20	24.00	.00	3.00	20.00	4.30	.00	12.00	1.00	1.00	15.00
0	2.00	24.00	.00	3.00	20.00	4.30	.00	12.00	1.00	1.00	15.00
0	1.80	24.00	.00	3.00	20.00	4.30	.00	12.00	1.00	1.00	15.00
0	1.60	24.00	.00	3.00	20.00	4.30	.00	12.00	1.00	1.00	15.00

0	1.40	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	1.00	15.00
0	1.20	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	1.00	15.00
0	1.00	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	1.00	15.00
0	.80	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	1.00	15.00
0	.60	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	1.00	15.00
0	.40	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	1.00	15.00
0	.20	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	1.00	15.00
1	3.00	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	2.80	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	2.60	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	2.40	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	2.20	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	2.00	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	1.80	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	1.60	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	1.40	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	1.20	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	1.00	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	.80	24.00	.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	.60	24.00	14.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	.40	30.00	21.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
1	.20	30.00	4.00	5.00	40.00	4.50	.00	12.00	1.00	8.00	15.00
0	3.00	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	2.80	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	2.60	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	2.40	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	2.20	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	2.00	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	1.80	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	1.60	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	1.40	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	1.20	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	1.00	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	.80	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	.60	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	.40	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	.20	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	8.00	15.00
0	3.00	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	1.00	15.00
0	2.80	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	1.00	15.00
0	2.60	24.00	.00	6.00	11.00	3.50	.00	12.00	.00	1.00	15.00

	2.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.00	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.80	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.60	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.00	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.80	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.60	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	3.00	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.80	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.60	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.00	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.80	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.60	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.00	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.80	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.60	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	3.00	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.80	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.60	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	2.00	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.80	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.60	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	1.00	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.80	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.60	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.40	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00
	.20	24.00	.00	0.00	11.00	3.50	.00	72.00	.00	1.00	15.00

41441 11/14/81 SMS-88

1.00	24.00	.00	0.00	17.00	2.00	.00	00.00	2.00	27.00	15.00
2.00	24.00	.00	0.00	17.00	2.00	.00	00.00	2.00	27.00	15.00
2.00	24.00	.00	0.00	17.00	2.00	.00	00.00	2.00	27.00	15.00
2.40	24.00	.00	0.00	17.00	2.00	.00	00.00	2.00	27.00	15.00
2.20	24.00	.00	0.00	17.00	2.00	.00	00.00	2.00	27.00	15.00
2.00	24.00	.00	0.00	17.00	2.00	.00	00.00	2.00	27.00	15.00
1.80	24.00	12.00	0.00	17.00	2.00	.00	00.00	2.00	27.00	15.00
1.00	25.00	25.00	0.00	17.00	2.00	.00	00.00	2.00	27.00	15.00

1	1.40	23.00	21.00	6.00	17.00	2.00	.00	60.00	2.00	27.00	15.00
1	1.20	23.00	23.00	6.00	17.00	2.00	.00	60.00	2.00	27.00	15.00
1	1.00	23.00	19.00	6.00	17.00	2.00	.00	60.00	2.00	27.00	15.00
1	.80	23.00	.00	6.00	17.00	2.00	.00	60.00	2.00	27.00	15.00
1	.60	22.00	.00	6.00	17.00	2.00	.00	60.00	2.00	27.00	15.00
1	.40	25.00	.00	6.00	17.00	2.00	.00	60.00	2.00	27.00	15.00
1	.20	25.00	.00	6.00	17.00	2.00	.00	60.00	2.00	27.00	15.00
0	3.00	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.80	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.60	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.40	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.20	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.00	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.80	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.60	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.40	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.20	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.00	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	.80	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	.60	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	.40	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	.20	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
1	3.00	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.80	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.60	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.40	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.20	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.00	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.80	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.60	24.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.40	14.00	8.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.20	20.00	27.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.00	25.00	25.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	.80	21.00	15.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	.60	23.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	.40	23.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	.20	22.00	.00	6.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
0	3.00	24.00	.00	3.00	17.00	2.00	.00	50.00	2.00	8.00	15.00
0	2.80	24.00	.00	3.00	17.00	2.00	.00	50.00	2.00	8.00	15.00

U	2.00	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	2.40	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	2.20	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	2.00	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	1.80	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	1.60	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	1.40	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	1.20	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	1.00	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	.80	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	.60	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	.40	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
U	.20	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	8.00	15.00
1	3.00	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	2.80	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	2.60	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	2.40	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	2.20	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	2.00	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	1.80	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	1.60	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	1.40	24.00	.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	1.20	24.00	4.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	1.00	23.00	14.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	.80	23.00	15.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	.60	23.00	17.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	.40	23.00	21.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	.20	23.00	1.00	3.00	17.00	2.00	.00	58.00	2.00	1.00	15.00
1	3.00	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	2.80	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	2.60	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	2.40	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	2.20	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	2.00	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	1.80	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	1.60	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	1.40	24.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	1.20	23.00	19.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	1.00	23.00	21.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00

1	.00	23.00	23.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	.00	22.00	8.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	.40	23.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00
1	.20	26.00	.00	3.00	17.00	2.00	.00	53.00	2.00	27.00	15.00

CAPE FAIRWEATHER 11/16/81 BPB-06

1	3.00	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.80	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.60	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.40	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.20	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	2.00	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.80	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.60	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.40	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.20	24.00	18.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	1.00	25.00	19.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	.80	26.00	18.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	.60	23.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	.40	23.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
1	.20	25.00	.00	3.00	17.00	2.00	.00	60.00	2.00	8.00	15.00
0	3.00	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.80	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.60	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.40	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.20	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	2.00	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.80	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.60	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.40	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.20	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	1.00	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	.80	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	.60	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	.40	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
0	.20	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	1.00	15.00
1	3.00	24.00	.00	3.00	17.00	2.00	.00	60.00	2.00	27.00	15.00

2.60	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.60	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.40	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.40	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.00	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.80	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.60	24.00	10.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.40	23.00	20.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.20	23.00	23.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.00	23.00	22.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.80	23.00	17.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.60	23.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.40	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.40	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.40	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.60	23.00	25.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.00	23.00	25.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.80	23.00	24.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.60	25.00	24.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.40	25.00	25.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.20	25.00	25.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.00	20.00	4.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.80	20.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.60	20.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.40	20.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.20	23.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
3.00	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.80	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.60	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.40	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.20	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
2.00	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.80	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.60	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.40	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.20	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
1.00	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.80	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.60	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00
.40	24.00	.00	5.00	17.00	2.00	.00	30.00	2.00	27.00	15.00

1	.40	24.00	.00	0.00	17.00	2.00	.00	30.00	2.00	1.00	15.00
1	1.00	24.00	.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	2.00	24.00	.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	2.00	24.00	.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	2.40	24.00	.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	2.00	24.00	1.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	2.00	25.00	23.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	1.00	25.00	25.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	1.00	25.00	25.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	1.40	23.00	23.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	1.00	23.00	23.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	1.00	23.00	23.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	.80	25.00	17.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	.60	25.00	.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	.40	25.00	.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00
1	.20	23.00	.00	0.00	17.00	2.00	.00	30.00	2.00	0.00	15.00

41346 11/17/81 SPS-00

1	1.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	2.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	2.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	2.40	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	2.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	2.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	1.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	1.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	1.40	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	1.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	1.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	.00	24.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	.00	23.00	4.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	.40	23.00	3.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	.20	25.00	.00	3.00	10.00	2.50	.00	60.00	1.00	0.00	15.00
1	3.00	24.00	.00	3.00	0.00	1.50	.00	60.00	1.00	0.00	15.00
1	2.00	24.00	.00	3.00	0.00	1.50	.00	60.00	1.00	27.00	15.00
1	2.00	24.00	.00	3.00	0.00	1.50	.00	60.00	1.00	27.00	15.00
1	2.40	24.00	.00	3.00	0.00	1.50	.00	60.00	1.00	27.00	15.00

0	2.20	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	2.00	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	1.60	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	1.40	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	1.20	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	1.00	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	.80	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	.60	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	.40	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
0	.20	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	27.00	15.00
1	3.00	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	2.80	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	2.60	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	2.40	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	2.20	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	2.00	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	1.80	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	1.60	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	1.40	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	1.20	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	1.00	24.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	.80	24.00	21.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	.60	23.00	23.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	.40	25.00	10.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	.20	20.00	.00	3.00	6.00	1.50	.00	60.00	1.00	26.00	15.00
1	2.00	24.00	.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	1.80	24.00	.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	1.60	24.00	.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	1.40	24.00	.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	1.20	24.00	.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	1.00	24.00	10.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	.80	23.00	23.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	.60	25.00	24.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	.40	23.00	11.00	3.00	6.00	1.50	.00	60.00	.00	26.00	15.00
1	.20	25.00	.00	3.00	6.00	1.50	.00	60.00	.00	27.00	15.00
1	3.00	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
1	2.80	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
1	2.60	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
1	2.40	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00

I	2.20	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	2.00	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	1.80	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	1.60	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	1.40	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	1.20	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	1.00	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	.80	23.00	18.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	.60	25.00	25.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	.40	24.00	18.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
I	.20	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	27.00	15.00
U	3.00	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	2.80	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	2.60	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	2.40	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	2.20	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	2.00	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	1.80	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	1.60	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	1.40	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	1.20	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	1.00	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	.80	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	.60	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	.40	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
U	.20	24.00	.00	3.00	6.00	1.50	.00	77.00	.00	8.00	15.00
I	3.00	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	2.80	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	2.60	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	2.40	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	2.20	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	2.00	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	1.80	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	1.60	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	1.40	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	1.20	24.00	.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	1.00	24.00	19.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	.80	25.00	25.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00
I	.60	30.00	30.00	6.00	6.00	1.50	.00	80.00	1.00	8.00	15.00

1	.40	23.00	40.00	0.00	0.00	1.50	.00	80.00	1.00	0.00	15.00
1	.20	23.00	.00	0.00	0.00	1.50	.00	80.00	1.00	0.00	15.00
1	3.00	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.80	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.60	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.40	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.20	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.00	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.80	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.60	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.40	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.20	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.00	24.00	10.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	.80	23.00	25.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	.60	23.00	20.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	.40	23.00	0.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	.20	23.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	3.00	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.80	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.60	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.40	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.20	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	2.00	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.80	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.60	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.40	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.20	24.00	.00	0.00	0.00	1.50	.00	80.00	1.00	47.00	15.00
1	1.00	24.00	.00	0.00	0.00	1.50	.00	80.00	.00	47.00	15.00
1	.80	24.00	22.00	0.00	0.00	1.50	.00	80.00	.00	47.00	15.00
1	.60	23.00	25.00	0.00	0.00	1.50	.00	80.00	.00	47.00	15.00

1	.40	23.00	19.00	0.00	0.00	1.50	.00	60.00	.00	60.00	15.00
1	.20	23.00	.00	0.00	0.00	1.50	.00	60.00	.00	60.00	15.00
1	1.00	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	2.00	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	2.00	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	2.40	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	2.20	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	2.00	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	1.80	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	1.60	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	1.40	23.00	19.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	1.20	23.00	22.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	1.00	23.00	23.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	.80	20.00	20.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	.60	23.00	23.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	.40	20.00	17.00	0.00	0.00	1.50	.00	60.00	.00	61.00	15.00
1	.20	20.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	1.00	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	2.00	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	2.00	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	2.40	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	2.20	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	2.00	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	1.80	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	1.60	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	1.40	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	1.20	24.00	12.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	1.00	22.00	22.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	.80	23.00	23.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	.60	20.00	20.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	.40	20.00	15.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00
1	.20	24.00	.00	0.00	0.00	1.50	.00	60.00	.00	0.00	15.00

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1	3.00	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	60.00	12.00
1	2.80	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	60.00	12.00
1	2.60	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	60.00	12.00
1	2.40	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	60.00	12.00

1	2.20	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	2.00	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.80	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.60	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.40	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.20	24.00	.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.00	15.00	15.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	.80	43.00	19.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	.60	39.00	21.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	.40	40.00	10.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	.20	35.00	.00	3.00	5.00	1.50	.00	60.00	.00	28.00	12.00
0	3.00	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	2.80	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	2.60	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	2.40	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	2.20	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	2.00	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	1.80	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	1.60	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	1.40	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	1.20	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	1.00	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	.80	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	.60	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	.40	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
0	.20	24.00	.00	3.00	5.00	1.00	50.00	60.00	.00	27.00	12.00
1	3.00	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	2.80	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	2.60	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	2.40	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	2.20	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	2.00	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	1.80	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	1.60	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	1.40	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	1.20	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	1.00	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	.80	24.00	.00	3.00	5.00	1.50	1.00	60.00	.00	8.00	12.00
1	.80	24.00	15.00	3.00	5.00	1.50	.00	60.00	.00	8.00	12.00

1	.40	30.00	.00	5.00	5.00	1.50	.00	00.00	.00	6.00	12.00
1	.20	31.00	.00	5.00	5.00	1.50	.00	00.00	.00	6.00	12.00
1	5.00	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	2.80	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	2.60	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	2.40	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	2.20	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	2.00	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	1.80	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	1.60	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	1.40	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	1.20	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	1.00	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	.80	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	.60	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	.40	46.00	7.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	.20	45.00	.00	5.00	5.00	1.50	.00	11.00	1.00	8.00	11.00
1	5.00	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	4.80	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	4.60	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	4.40	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	4.20	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	4.00	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	3.80	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	3.60	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	3.40	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	3.20	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	3.00	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	2.80	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	2.60	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	2.40	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	2.20	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	2.00	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	1.80	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	1.60	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	1.40	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	1.20	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	1.00	24.00	.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	.80	34.00	10.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	.60	40.00	37.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	.40	43.00	40.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	.20	38.00	34.00	5.00	5.00	1.50	.00	11.00	1.00	27.00	12.00
1	5.00	24.00	.00	5.00	5.00	1.50	.00	00.00	1.00	26.00	12.00
1	2.00	24.00	.00	5.00	5.00	1.50	.00	00.00	1.00	26.00	12.00
1	2.00	24.00	.00	5.00	5.00	1.50	.00	00.00	1.00	26.00	12.00
1	2.40	24.00	.00	5.00	5.00	1.50	.00	00.00	1.00	26.00	12.00
1	2.20	24.00	.00	5.00	5.00	1.50	.00	00.00	1.00	26.00	12.00
1	2.00	24.00	.00	5.00	5.00	1.50	.00	00.00	1.00	26.00	12.00
1	1.80	24.00	.00	5.00	5.00	1.50	.00	00.00	1.00	26.00	12.00

1	1.40	24.00	.00	5.00	5.00	1.50	.00	60.00	1.00	24.00	12.00
1	1.40	24.00	.00	5.00	5.00	1.50	.00	60.00	1.00	25.00	12.00
1	1.20	24.00	.00	5.00	5.00	1.50	.00	60.00	1.00	26.00	12.00
1	1.00	24.00	11.00	5.00	5.00	1.50	.00	60.00	1.00	27.00	12.00
1	.80	35.00	34.00	5.00	5.00	1.50	.00	60.00	1.00	28.00	12.00
1	.60	33.00	33.00	5.00	5.00	1.50	.00	60.00	1.00	29.00	12.00
1	.40	30.00	30.00	5.00	5.00	1.50	.00	60.00	1.00	28.00	12.00
1	.20	35.00	35.00	5.00	5.00	1.50	.00	60.00	1.00	28.00	12.00
1	3.00	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	2.80	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	2.60	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	2.40	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	2.20	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	2.00	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.80	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.60	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.40	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.20	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	1.00	27.00	27.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	.80	30.00	30.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	.60	31.00	31.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	.40	27.00	14.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	.20	25.00	.00	6.00	5.00	1.50	.00	60.00	.00	28.00	12.00
1	3.00	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	2.80	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	2.60	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	2.40	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	2.20	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	2.00	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	1.80	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	1.60	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	1.40	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	1.20	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	1.00	24.00	11.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	.80	24.00	23.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	.60	33.00	33.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	.40	23.00	17.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	.20	25.00	.00	6.00	5.00	1.50	.00	60.00	.00	27.00	12.00
1	3.00	24.00	.00	6.00	5.00	1.50	.00	60.00	.00	0.00	12.00

1	2.80	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	2.60	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	2.40	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	2.20	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	2.00	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	1.80	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	1.60	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	1.40	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	1.20	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	1.00	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	.80	24.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	.60	34.00	34.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	.40	49.00	15.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	.20	51.00	.00	0.00	5.00	1.50	.00	80.00	.00	0.00	12.00
1	1.80	24.00	.00	0.00	5.00	1.50	.00	80.00	1.00	0.00	12.00
1	1.40	24.00	.00	0.00	5.00	1.50	.00	80.00	1.00	0.00	12.00
1	1.20	24.00	.00	0.00	5.00	1.50	.00	80.00	1.00	0.00	12.00
1	1.00	24.00	.00	0.00	5.00	1.50	.00	80.00	1.00	0.00	12.00
1	.80	24.00	.00	0.00	5.00	1.50	.00	80.00	1.00	0.00	12.00
1	.60	39.00	39.00	0.00	5.00	1.50	.00	80.00	1.00	0.00	12.00
1	.40	50.00	10.00	0.00	5.00	1.50	.00	80.00	1.00	0.00	12.00
1	.20	64.00	14.00	0.00	5.00	1.50	.00	80.00	1.00	0.00	12.00
1	3.00	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	2.80	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	2.60	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	2.40	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	2.20	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	2.00	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	1.80	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	1.60	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	1.40	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	1.20	24.00	12.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	1.00	30.00	28.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	.80	53.00	23.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	.60	27.00	27.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	.40	68.00	68.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	.20	73.00	5.00	0.00	4.00	1.00	.00	80.00	1.00	47.00	12.00
1	3.00	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	68.00	12.00
1	2.80	24.00	.00	0.00	4.00	1.00	.00	80.00	1.00	68.00	12.00

1	2.50	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	2.40	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	2.20	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	2.00	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	1.80	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	1.60	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	1.40	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	1.20	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	1.00	24.00	.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	.80	0.00	0.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	.60	30.00	30.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	.40	30.00	30.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00
1	.20	27.00	3.00	0.00	4.00	1.00	.00	00.00	1.00	20.00	10.00

41441	11/10/81		BPS-HB								
U	3.00	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	2.80	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	2.60	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	2.40	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	2.20	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	2.00	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	1.80	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	1.60	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	1.40	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	1.20	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	1.00	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	.80	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	.60	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	.40	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	.20	24.00	.00	3.00	15.00	3.00	2.00	04.00	2.00	30.00	15.00
U	3.00	24.00	.00	3.00	17.00	3.00	1.00	00.00	2.00	21.00	15.00
U	2.80	24.00	.00	3.00	17.00	3.00	1.00	00.00	2.00	21.00	15.00
U	2.60	24.00	.00	3.00	17.00	3.00	1.00	00.00	2.00	21.00	15.00
U	2.40	24.00	.00	3.00	17.00	3.00	1.00	00.00	2.00	21.00	15.00
U	2.20	24.00	.00	3.00	17.00	3.00	1.00	00.00	2.00	21.00	15.00
U	2.00	24.00	.00	3.00	17.00	3.00	1.00	00.00	2.00	21.00	15.00
U	1.80	24.00	.00	3.00	17.00	3.00	1.00	00.00	2.00	21.00	15.00

0	1.60	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	21.00	15.00
0	1.40	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	21.00	15.00
0	1.20	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	21.00	15.00
0	1.00	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	21.00	15.00
0	.80	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	21.00	15.00
0	.60	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	21.00	15.00
0	.40	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	21.00	15.00
0	.20	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	21.00	15.00
1	3.00	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	2.80	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	2.60	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	2.40	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	2.20	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	2.00	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	1.80	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	1.60	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	1.60	24.00	21.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	1.60	31.00	29.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	1.40	23.00	20.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	1.20	23.00	20.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	1.00	24.00	21.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	.80	25.00	17.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	.60	24.00	22.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	.40	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	.20	24.00	.00	5.00	17.00	5.00	1.00	60.00	2.00	20.00	15.00
1	3.00	24.00	.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	2.80	24.00	.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	2.60	24.00	.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	2.40	24.00	.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	2.20	24.00	.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	2.00	24.00	.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	1.80	24.00	.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	1.60	24.00	.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	1.40	24.00	4.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	1.20	21.00	12.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	1.00	22.00	10.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	.80	23.00	22.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	.60	23.00	22.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00
1	.40	23.00	20.00	5.00	15.00	2.50	.00	60.00	2.00	8.00	15.00

1	.20	23.00	5.00	5.00	15.00	2.50	.00	00.00	2.00	0.00	15.00
1	3.00	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	2.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	2.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	2.40	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	2.20	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	2.00	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	1.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	1.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	1.40	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	1.20	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	1.00	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	.40	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	.20	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	1.00	15.00
1	3.00	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	2.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	2.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	2.40	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	2.20	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	2.00	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	1.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	1.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	1.40	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	1.20	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	1.00	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	.80	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	.40	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	.20	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	3.00	24.00	.00	5.00	15.00	2.50	.00	00.00	2.00	31.00	15.00
1	2.80	24.00	.00	5.00	15.00	2.50	1.00	00.00	2.00	30.00	15.00
1	2.80	24.00	.00	5.00	15.00	2.50	1.00	00.00	2.00	30.00	15.00
1	2.40	24.00	.00	5.00	15.00	2.50	1.00	00.00	2.00	30.00	15.00
1	2.20	24.00	.00	5.00	15.00	2.50	1.00	00.00	2.00	30.00	15.00
1	2.00	24.00	.00	5.00	15.00	2.50	1.00	00.00	2.00	30.00	15.00
1	1.80	24.00	.00	5.00	15.00	2.50	1.00	00.00	2.00	30.00	15.00

```
0    1.40   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   30.00   15.00
0    1.20   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   30.00   15.00
0    1.00   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   30.00   15.00
0     .80   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   30.00   15.00
0     .60   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   30.00   15.00
0     .40   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   30.00   15.00
0     .20   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   30.00   15.00
0    3.00   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    2.80   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    2.60   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    2.40   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    2.20   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    2.00   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    1.80   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    1.60   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    1.40   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    1.20   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    1.00   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0     .80   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0     .60   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0     .40   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0     .20   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   21.00   15.00
0    3.00   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    2.80   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    2.60   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    2.40   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    2.20   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    2.00   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    1.80   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    1.60   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    1.40   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    1.20   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    1.00   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0     .80   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0     .60   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0     .40   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0     .20   24.00   .00   3.00   15.00   2.50   1.00   84.00   2.00   26.00   15.00
0    3.00   24.00   .00   3.00   13.00   2.50    .00   86.00   2.00    8.00   15.00
0    2.80   24.00   .00   3.00   13.00   2.50    .00   88.00   2.00    8.00   15.00
```

0	4.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	3.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	2.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	2.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	1.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	1.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	1.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	1.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	1.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	8.00	15.00
0	5.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	4.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	4.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	4.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	4.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	4.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	3.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	3.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	3.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	3.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	3.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	2.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	2.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	2.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	2.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	2.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	1.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	1.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	1.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	1.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	1.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	1.00	15.00
0	5.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	4.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	4.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	4.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	4.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	4.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	3.80	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	3.60	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	3.40	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	3.20	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00
0	3.00	24.00	.00	3.00	13.00	2.50	.00	00.00	2.00	31.00	15.00

C	.00	24.00	.00	3.00	13.00	2.50	.00	68.00	2.00	31.00	15.00
C	.00	24.00	.00	3.00	13.00	2.50	.00	68.00	2.00	31.00	15.00
C	.40	24.00	.00	3.00	13.00	2.50	.00	68.00	2.00	31.00	15.00
C	.20	24.00	.00	3.00	13.00	2.50	.00	68.00	2.00	31.00	15.00

PT. ANULL 11/10/81 0PH-04

I	3.00	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	2.00	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	2.60	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	2.40	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	2.20	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	2.00	20.00	4.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	1.80	31.00	20.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	1.80	20.00	16.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	1.40	23.00	24.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	1.20	23.00	21.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	1.00	23.00	22.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	.80	30.00	20.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	.60	23.00	10.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	.40	23.00	14.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
I	.20	30.00	8.00	3.00	15.00	3.00	1.00	64.00	2.00	0.00	15.00
C	3.00	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	2.80	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	2.60	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	2.40	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	2.20	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	2.00	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	1.80	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	1.80	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	1.40	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	1.20	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	1.00	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	.80	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	.60	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	.40	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	.20	20.00	.00	3.00	15.00	3.00	1.00	64.00	2.00	1.00	15.00
C	3.00	20.00	.00	3.00	17.00	3.00	1.00	60.00	2.00	31.00	15.00

0	2.00	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	2.00	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	2.40	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	2.40	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	2.00	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	1.80	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	1.80	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	1.40	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	1.20	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	1.00	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	.80	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	.60	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	.40	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	.20	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	31.00	15.00
0	3.00	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	2.80	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	2.60	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	2.40	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	2.20	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	2.00	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	1.80	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	1.60	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	1.40	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	1.20	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	1.00	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	.80	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	.60	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	.40	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	.20	20.00	.00	5.00	17.00	5.00	1.00	80.00	2.00	30.00	15.00
0	3.00	20.00	.00	5.00	15.00	2.50	.00	80.00	2.00	21.00	15.00
0	2.80	20.00	.00	5.00	15.00	2.50	.00	80.00	2.00	21.00	15.00
0	2.60	20.00	.00	5.00	15.00	2.50	.00	80.00	2.00	21.00	15.00
0	2.40	20.00	.00	5.00	15.00	2.50	.00	80.00	2.00	21.00	15.00
0	2.20	20.00	.00	5.00	15.00	2.50	.00	80.00	2.00	21.00	15.00
0	2.00	20.00	.00	5.00	15.00	2.50	.00	80.00	2.00	21.00	15.00
0	1.80	20.00	.00	5.00	15.00	2.50	.00	80.00	2.00	21.00	15.00
0	1.60	20.00	.00	5.00	15.00	2.50	.00	80.00	2.00	21.00	15.00
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0	.40	40.00	.00	5.00	15.00	2.50	.00	60.00	2.00	21.00	15.00
0	.20	40.00	.00	5.00	15.00	2.50	.00	60.00	2.00	21.00	15.00
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1	2.80	40.00	.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	2.60	34.00	11.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	2.40	31.00	14.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	2.20	30.00	24.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	2.00	30.00	21.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	1.80	45.00	14.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	1.60	45.00	14.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	1.40	40.00	12.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	1.20	40.00	26.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	1.00	30.00	24.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	.80	45.00	14.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	.60	40.00	8.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	.40	40.00	.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	.20	30.00	.00	5.00	15.00	2.50	.00	60.00	2.00	40.00	15.00
1	4.00	40.00	.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
1	3.80	40.00	.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
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1	2.00	31.00	31.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
1	1.80	30.00	24.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
1	1.60	45.00	25.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
1	1.40	40.00	26.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
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1	1.00	31.00	31.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
1	.80	30.00	30.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
1	.60	45.00	25.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00
1	.40	40.00	25.00	6.00	15.00	2.50	1.00	64.00	.00	8.00	15.00

1	.60	30.00	1.00	8.00	15.00	2.50	1.00	89.00	.00	8.00	15.00
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1	3.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	3.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	3.40	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	3.20	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	3.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	2.80	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
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1	1.80	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	1.40	26.00	0.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	1.20	31.00	21.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
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1	.80	30.00	3.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	.40	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	1.00	15.00
1	.20	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	4.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	3.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	3.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	3.40	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	3.20	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	3.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	2.80	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	2.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	2.40	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	2.20	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	2.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	1.80	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	1.80	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	1.40	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
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1	1.00	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00
1	.80	26.00	.00	8.00	15.00	2.50	1.00	89.00	.00	31.00	15.00

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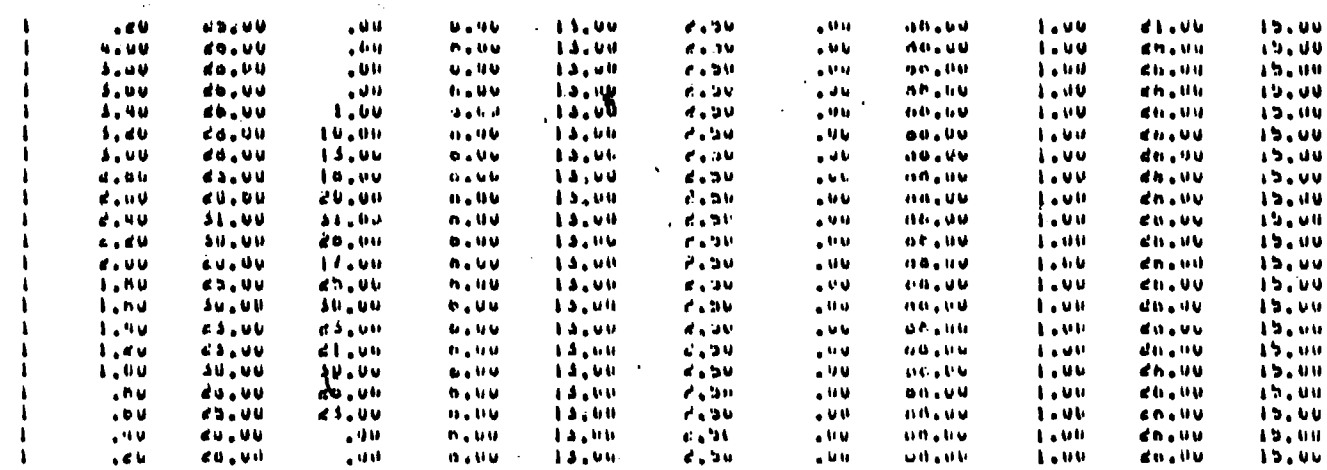
0	3.40	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	3.20	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	3.00	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	2.80	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	2.60	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	2.40	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	2.20	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	2.00	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	1.80	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	1.60	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	1.40	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	1.20	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	1.00	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	.80	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	.60	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	.40	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
0	.20	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	30.00	15.00
1	4.00	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	3.80	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	3.60	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	3.40	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	3.20	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	3.00	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	2.80	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	2.60	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	2.40	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	2.20	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	2.00	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	1.80	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	1.60	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	1.40	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	1.20	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	1.00	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	.80	40.00	7.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	.60	45.00	14.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00
1	.40	40.00	.00	0.00	15.00	2.50	.00	88.00	1.00	31.00	15.00



APPENDIX B

CUMULATIVE DETECTION PROBABILITY

Cumulative detection probability (CDP) as a function of range is a useful measure of sensor detection performance. CDP provides a better picture of sensor detection performance than detection range statistics alone because its computation considers targets missed as well as those detected. Simply stated, CDP is defined (Reference 15) as the probability that a target will have been detected by the time it closes to a given range; it is a monotonically increasing function of closing range. The following discussion describes the computation of CDP as a function of range from exercise data.

Detection run data were collected during the experiments in such a manner that the search vessels did not close range on every target until detection occurred or zero range was reached; instead, a closest point of approach (CPA) was reached, after which the target passed abeam of the search vessel and was no longer considered a detection opportunity. Many targets were never detected on these runs. In addition, the CPA ranges for many of the missed targets were greater than the initial detection ranges of some of the detected targets.

With data of this type, CDP can be determined from the observed detection ranges (for detected targets) and CPA ranges (for missed targets) as follows:

A. Consider a series of adjacent range bands numbered sequentially (beginning with 1 at the largest range value, 2 at the next largest, etc.) as shown in Figure B-1. Let j denote a general number in this serialization, with i being a specific value of j. The reader should note that, during the experiment, targets were not always closed radially as depicted in Figure B-1 so that the radar operators would not be fully alerted to target position. While this procedure introduces some variability in the number of "glimpses" the

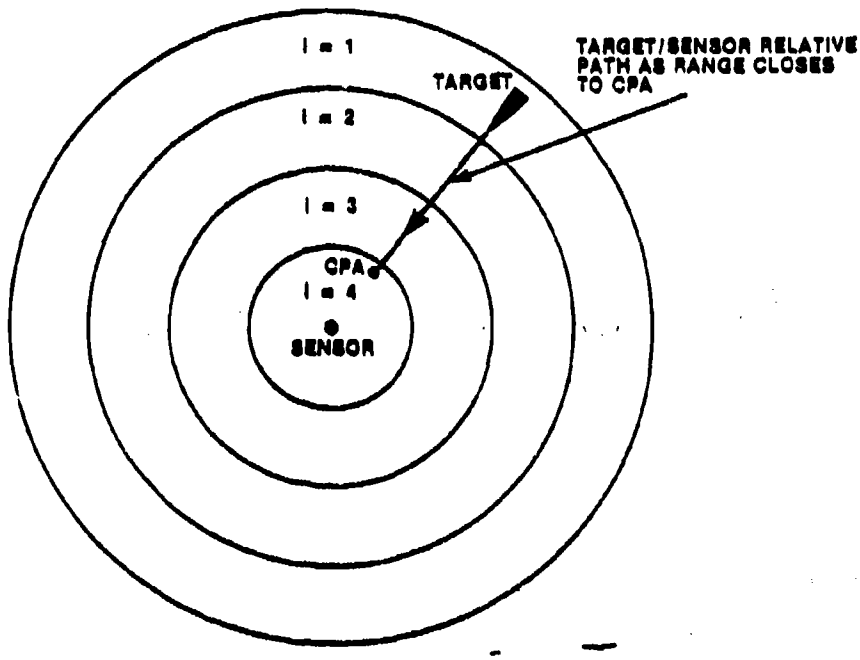


Figure B-1. Range Bands for CDP Calculation

radar gets of a target at each range, the effect was randomized for each target type and should not have introduced any significant systematic error to the CDP calculations.

B. Let

q_j ≡ probability of <u>not</u> detecting in the j^{th} range band a previously undetected target that enters the j^{th} range band.

C. For a closing target, the cumulative probability of <u>not</u> detecting up to a specific range band i is

$$P_{Nci} = \prod_{j=1}^{i} q_j$$

and the CDP up to range band i is

$$P_{Dci} = 1 - \prod_{j=1}^{i} q_j = 1 - \left[1 - P_{Dc(i-1)}\right] q_i \,. \qquad (1)$$

D. Equation (1) can be rewritten as

$$P_{Dci} = P_{Dc(i-1)} + \left[1 - P_{Dc(i-1)}\right] p_i \qquad (2)$$

where $p_i = (1 - q_i) \equiv$ probability of detecting in the i^{th} range band a previously undetected target that enters the i^{th} range band.

E. For a given range band, if

M_i = number of targets entering the range band i that have not been previously detected and

N_i = number of targets of the quantity M_i that are detected in range band i, then

$p_i = N_i/M_i$.

F. Substitution into (2) yields

$$P_{Dci} = P_{Dc(i-1)} + \left[1 - P_{Dc(i-1)}\right] \frac{N_i}{M_i} \quad . \tag{3}$$

For this analysis, the computer routine used to generate CDP versus range curves treats each detection or miss as a separate "range band," and equation (3) is applied to each observation individually. This technique requires that a detection/miss designator, detection/CPA range, and start range be input for each target of opportunity. The computer routine must order the data according to detection/CPA range and order all detections made at a specific range before all misses with CPAs at that same range. If the data are ordered as described above and CDP calculations are done serially from farthest to closest range, no errors result from multiple detections and/or misses occurring at equal range being treated separately.

In summary, CDP versus range curves provide a picture of how target detection probability increases as sensor-to-target range closes.

APPENDIX C

METRIC CONVERSION FACTORS

1. Feet to Meters

1 foot = 0.3048 meters

Thus:

3 to 4 foot swells ≈ 1 meter swells,

a 16 foot boat ≈ a 5 meter boat, and

an altitude of 500 feet ≈ a 150 meter altitude.

2. Nautical Miles to Kilometers

1 nautical mile (nm) = 1.852 kilometers (km)

Thus:

10 nm visibility ≈ 18.5 km visibility, and

a 2 nm range ≈ a 3.7 km range.

3. Knots to Meters per Second and Kilometers per Hour

1 knot = 0.5144 meters per second

1 knot = 1.852 kilometers per hour

Thus:

a 10 knot wind speed ≈ a wind speed of 5 meters per second, and

a 10 knot search speed ≈ a search speed of 18 kilometers per hour.